

**Exploration of Visual Pedagogy to Make Mandarin Learnable:
A Teacher Action Research Project**

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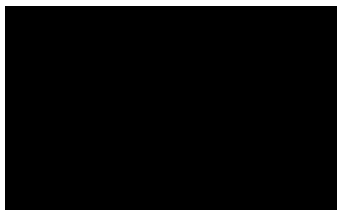
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Declaration

I declare that except where due acknowledgement has been made; this research proposal is a presentation of my own work and has not been submitted in any form for another degree at any university or other tertiary institution. It contains no materials previously published or written by another person, except where due reference has been made in the text.

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Yaoyao Jin

February 9, 2018

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As a new teacher-researcher, I received many supports from my supervisors, colleagues, the M participant public school including my mentor teacher, the classroom teachers in the Year 5 and 6 class, as well as friends and my family during the research.

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Abstract

Visual pedagogy plays a crucial role in foreign language teaching and the majority of students are mainly visual learners, especially public-school students. As a result, the teacher-researcher adopted various visual materials in this research for students from an Australian Public school in the Year Five and Six class. Based on those visual materials, the teacher-researcher developed visual teaching strategies aimed to fully explore visual pedagogy that can bring substantial benefits to young learners. This thesis is composed of 6 chapters. In Chapter 1, the thesis introduces a general background of the study, and in Chapter 2, it examines the research literature on which this study is based. The Chapter 3 explains the method and describes who the participants are. The Chapter 4 provides the data from the use of chosen visual materials. Chapter 5 extends the data by examining a range of visual strategies. In the final chapter, the thesis discusses the implications of this research for the teaching of Mandarin language in Australian schools.

In the course of the research, the teacher-researcher found that a significant amount of content can be presented through visual materials. Considering students' interest and curiosity, the teacher-researcher believes that the choice of visual materials should be student-centered. Additionally, a variety of visual materials based on strategies the teacher-researcher used can result in higher levels of students' engagement in classroom than what would have been achieved with visual materials that only present words. For an example, students can be more easily distracted by watching a lengthy video, but are better engaged with short videos. Basically, students are interested in visualizing and guessing, however, the teacher-researcher found that the same strategy may not work equally well for both boys and girls. Cultural issues also have impacts on the implementation of visual teaching strategies. Therefore, students' age, interest, gender and cultural background should be considered when choosing visual materials and developing visual strategies.

Chapter 1. Research Context

1.0 Introduction

With a long history, teaching and learning of Mandarin as a Foreign Language (CFL) have witnessed a rapid expansion in recent years. On the one hand, teaching and learning CFL is in urgent demand as a result of China's recent development and globalization. On the other hand, there are many challenges that exist in terms of teaching CFL. This chapter will give a brief introduction to the research background and then raise research questions for this project which are related to personal experiences. Furthermore, the significance of the research will be outlined as well.

1.1 Research background: the importance of Mandarin language learning

It was not until the 1940s that the practice of teaching Mandarin to foreigners started to move beyond universities (Xing, 2006, cited in Tsung & Cruickshank, 2011). With 33 international students from all over the world including Czechoslovakia, Romania, Democratic People's Republic of Korea, Hungary, Bulgaria, and Poland, the first CFL class was launched in 1950. (Zhu, 2010). Since then, teaching Mandarin has become an integral part of second language learning in China (Zhu, 2010), and especially over the past decades, teaching Mandarin has witnessed a significant increase. (Stung & Cruickshank, 2011).

In the last three decades, economic growth in China has had a great influence on Mandarin language education worldwide. In contemporary society, China is developing rapidly, achieving the third place globally in terms of Comprehensive National Power (Yao & Zhou, 2012). China's rise to the top of the global economic and political order is one of the 21st century's most remarkable trends (Department of Foreign Affairs and Trade of the Australian Government, 2013, p. 3). By 2025, China is predicted to be

world's largest economy (Department of Foreign Affairs and Trade of the Australian Government, 2013, p.3).

The long-time bilateral relationship between Australia-China has facilitated the demand for Mandarin language learning in Australia. Mandarin has been taught in Australia since the 1950s, and it experienced a rapid expansion in the 1980s as China implemented the "reform and opening up" and Australia's attitude towards China became more open. In recent years, China has become a crucial neighbor for Australia in the Asia Pacific region. According to the statistics from the Department of Foreign Affairs and Trade of Australian Government (2013, p.2), China is Australia's largest trading partner, with the value of services and commodities between two countries worth over \$125 billion in 2012. As the Australia's second-largest source of well-educated migrants, more than 10,000 skilled Mandarin migrants had moved to Australia as of February 2013. In addition, China is the biggest source of international students in Australia. In 2012, almost 120,000 Mandarin students came to Australia for study. In 2015, the China-Australia Free Trade Agreement came into force, which is an historical agreement delivering real benefits to Australia. The close cooperation between China and Australia has resulted in the high demand for Mandarin language learning for Australians. Actually, Australia has been attaching great significance to learning the Mandarin language for several years. In 2008, the former Prime Minister of Australia, Kevin Rudd was dedicated to making Australia "the most Asia-literate country in the collective West" (Rudd, 2008, as cited in Huo, 2011, p.1). In brief, China and Australia are in a sustainable relationship in many respects. As the cooperation between China and Australia strengthens, the need for Australians to learn Mandarin has developed as well.

In fact, Asian literacy is crucial for Australia as China, India and other Asian nations are developing rapidly and exerting enormous impacts globally and on Australia (Beeson, 2014). In response to this tendency, the *Melbourne Declaration* (Ministerial Council for Education, 2008) demonstrated an explicit demand for Australians to be "Asia literate" through their school education and that all Australian students are supposed to be able to communicate across cultures, particularly Asian culture. This

policy agenda is being implemented through the Australian Curriculum, especially the Asian languages curriculum and the cross-curriculum priority area of “Asia and Australia’s engagement with Asia” (Halse, Kostogriz, Cloonan, Dyer, Toe & Weinmann, 2013). The White Paper on Australia in the Asian Century (Asian Century Taskforce, 2012, p.3) positions the teaching and learning of Asian languages as one of the national objectives that are integrated into national productivity. To illustrate, the tenth objective is:

‘All Australian students will have the opportunity, and be encouraged, to undertake a continuous course of study in an Asian language throughout their years of schooling’ (p.3)

In addition, in the recently developed Australian National Curriculum, Mandarin is listed as one of the prioritized Asian languages for students in primary and secondary schools (ACARA, 2012). To stimulate Mandarin language and Mandarin culture learning in Australia, a new initiative was launched by the international cooperation among the New South Wales (NSW) Department of Education and Communities-Western Sydney Office, Ningbo Municipal Bureau of Education and Western Sydney University. This initiative is known as Research-Oriented, School-Engaged Teacher Education (ROSETE). Thirty-five Mandarin university graduates have worked as teacher-researchers in this program, dedicating themselves to promoting Mandarin language teaching in Western Sydney before 2015 (Chen, 2015). The Mandarin language, particularly Mandarin, exerted great influence on the language of several peripheral countries including Japan, Vietnam and Korea (Travel China Guide, 2016).

Despite the fact that Mandarin is not only popular and significant in Asian countries but also in Western countries like Australia, which has many Mandarin learners, there are enormous difficulties in making Mandarin learnable. To demonstrate, in Australia, 94% of English-speaking learners discontinue their Mandarin lessons before completing secondary school (Asia Education Foundation 2010, Orton, 2008, as cited in Singh & Ballantyne, 2014, p.200). Therefore, as Singh and Ballantyne (2014, p.199) stated, making Mandarin learnable for learners, especially beginners with no relevant language background, is a fragile undertaking. Additionally, the fact that teacher-researchers lack professional Mandarin-teaching training and English

proficiency is also impeding the process of Mandarin teaching and learning. Since language and culture are inseparable, teaching a language is not only about teaching the language itself (Valdes, 1986, as cited in Xu, 2012, p.4). Hence, the differences between Mandarin culture and Australian culture may increase the difficulties in learning Mandarin as well. There is an obvious difference in educational culture between China and Australia. Mandarin teacher-researchers are primarily nurtured by the Mandarin education system, and their educational ideas are profoundly influenced by typical Mandarin educational culture. According to previous teacher-researchers, teaching performance relying on these beliefs turns out to under expectation (Chen, 2015).

In terms of the school where the teacher-researcher taught Mandarin, M Public School has a long history of being committed to promoting a safe, secure and caring environment conducive to maximizing learning outcomes for all students. The school's main purpose is to provide a quality curriculum, which is relevant and challenging. Based on this curriculum, the school expects to develop the skills and competencies necessary to participants and make contributions to the society of the future. The school's culture fosters the value of achievement in all aspects of learning and the pursuit of excellence in personal endeavors. Furthermore, M Public School, which regards Mandarin learning as its first priority of all lessons taught, is a new entity that joins the ROSETE program.

1.2 Developing the research question

To develop a research question, the researcher's experience counts. In this case, it has a close relationship with her own experiences. Firstly, calligraphy and Mandarin painting have been an indispensable part of the teacher-researcher's life since she was in primary school. As she grew up, she gradually understood that Mandarin painting and calligraphy do not simply mean drawing a picture or writing Mandarin characters with brush pen. They are distinctive Mandarin visual arts, which can

convey an artists' thoughts and understanding of typical Mandarin culture. As Hearn (2008) mentioned "To capture not only the external appearance of a subject but also its interior spirit as well—its energy, life force, spirit, is the aim of the traditional Mandarin painter. ”

After the teacher-researcher started learning about teaching Mandarin as a foreign language in her previous university, Ningbo University of Technology, she found that more and more foreigners began to learn Mandarin painting and calligraphy. During her second year in Ningbo University of Technology, she worked in Ningbo Tangyuan Mandarin School, where she taught foreigners Mandarin calligraphy and Mandarin painting. According to her own observation there, foreign students are interested in calligraphy, Mandarin painting, Mandarin kung fu and other aspects of Mandarin culture. The teacher-researcher was impressed by a female student from Italy who was keen on Mandarin painting. Having not attended any Mandarin learning class, she could speak a little Mandarin and has a good command of Mandarin words. According to her own words, she learned words and Mandarin expressions through Mandarin painting. Consequently, the teacher-researcher began to notice the connection between learning Mandarin painting and Mandarin language. However, the teacher-researcher did not attach great importance to it until she read some articles about visual pedagogy. Then, the thought of injecting visual materials into Mandarin learning in class gradually came into her mind. Research reported in educational literature suggests that the use of visuals can greatly increase the effectiveness of learning (Stokes, 2002).

Furthermore, the teacher-researcher has also been to France as an exchange student for half a year in her junior year in Ningbo University of Technology. One of the courses she took there was cross-cultural understanding. To illustrate, the students in the class were divided into different groups according to their different nationalities in the class and each group was supposed to give a presentation focusing on cross-cultural understanding. The teacher-researcher's group gave a presentation about different language and cultures. One of her group members articulated that language is one of the symbols presenting culture. The professor in the class was an incredibly insightful, showing the students different ways to learn cross-culturally and

discussing his critical thoughts. In the teacher-researcher's spare time, she taught Mandarin to her friends who came from Japan and France from time to time. For her, it was wonderful and meaningful to share their intercultural issues with friends and learn different languages from each other. Gradually, it became clear to the teacher-researcher that language learning and cultural learning are genuinely inseparable.

In conclusion, the teacher-researcher's own experiences mentioned above is closely related to her following main research question and contributory questions, which focus on visual literacy in Mandarin teaching connected to Mandarin language pedagogy, and the spread of Mandarin culture.

Research questions

The main research question is: How can a visual method be developed to make Mandarin learnable in speaking, writing and understanding for student learners in the Western Sydney Region?

The three contributory questions are as follow:

1. What kind of visual materials can be used to engage students in teaching CFL?
2. What are the effects of visual materials in understanding Mandarin words and sentences for Australian public school students?
3. How can these visual materials be developed into useful strategies to increase engagement in classroom?

Visual strategies will include:

- 1) Using visual materials in a different way to enhance the connection with Language
- 2) Visual-related activities including "You Draw I Guess", and "Colouring-in".

1.3 Research aim and expected outcomes

This study aims to explore the effectiveness of visual pedagogy in the process of learning Mandarin. The research strives to make Mandarin language easier to learn through the use of visual pedagogy. There is no doubt that it is difficult to learn Mandarin as a second language. As an international language, it is widely believed that visual pedagogy improves the communication between teachers and students, and helps students establish a deeper understanding of Mandarin and Mandarin culture. Using visual pedagogy in CFL teaching will help CFL learners to engage in Mandarin learning. Consequently, the expectation in this research is to discover the issues that make Mandarin language difficult for beginner learners.

Expected outcomes:

The study is not only a research that contributes to teaching Mandarin as a foreign language in terms of visual pedagogy in Australia, but also a process of enhancing personal Mandarin-teaching skills and comprehensive English abilities. Consequently, the outcomes will contain two aspects:

- 1) -Facilitating the learning of CFL for Australian learners.
 - Developing valid CFL teaching strategies which are based on visual materials to help learners understand Mandarin language and Mandarin culture better.
 - Identifying the influence of visual pedagogy on Mandarin learning and Mandarin cultural understanding.
 - Stimulating CFL learners' engagement in learning Mandarin.
- 2) -For the teacher-researcher, improving personal English proficiency.

1.4 Significance of the research

Language education is the foundation of general education. With the advancement of science and technology, the accelerated development of economic globalization,

and the formation of knowledge economy, the whole society place greater importance on foreign language learning. As a communicating tool, foreign language education can not only improve learners' social intercourse abilities, but also foster their multi-cultural consciousness (Ishihara & Cohen, 2014). This study, which injects visual pedagogy into CFL teaching, aims to explore new effective methods of CFL teaching and improve Mandarin language learning.

Firstly, this research is a response to policies and efforts in Australia. Australian schools are catering to increasingly number of CFL learners, including overseas-born Mandarin who cannot speak Mandarin. In 1987, The National Policy on Languages (NPL), the first comprehensive national language policy, listed Mandarin as a language that has a significant impact on global society (p.8).

Secondly, this research will contribute to the development of visual pedagogy in the area of CFL teaching. Certainly, there are many books and articles writing about visual literacy and visual pedagogy in general. However, few books or articles focus on visual materials and visual strategies used in CFL teaching, except some reference in cyber space (Li, 2015). But there is no doubt that visual literacy is of great significance in modern society (Burmark, 2002). Injecting visual pedagogy into CFL teaching is a new method of teaching a foreign language. And it may result in producing new valuable and substantial information by studying the effect of adopting visual materials and visual strategies in CFL teaching. Therefore, the findings of this research have the potential to provide meaningful information on foreign teaching pedagogy in Australia.

Thirdly, this research is conducive to improving language learning efficiency and understanding Mandarin culture. Visual literacy plays a crucial role in foreign language teaching. According to Hattwig, Burgess, Bussert and Medaille (2011) visual literacy enables an individual to effectively interpret, evaluate, use, create images and visual media.

Adopting visual pedagogy and utilizing learners' visual literacy contributes to the enhancement of CFL learners' appreciation and understanding of information in Mandarin painting, which is “国画” Guó Huà in Mandarin. Consequently, using some classical Mandarin painting and short videos, or organizing CFL learners to engage in Mandarin painting in classroom can trigger CFL learners' interest in Mandarin painting and deepen the understanding of the cognition of the word “国画”. Therefore, CFL learners may come to understand and learn Mandarin via these visual materials.

Chapter 2. Teaching and Learning Mandarin as a Foreign Language

2.0 Introduction

This chapter reviews three main aspects of the literature concerning the teacher-researcher's research topic and questions raised in Chapter 1. Firstly, basic terms about the Mandarin language will be introduced and reviewed. Then the teacher-researcher reviews the current situation of Teaching and Learning Mandarin as a Foreign Language in Australia, the U.S. and the U.K. This chapter also offers a review of visual literacy and visual pedagogy in language learning and Mandarin characters' visual features. The teacher-researcher also searched the relevant literature with regard to students' engagement in the classroom, including its categorization and assessment that can be used to observe students' engagement in her Mandarin class. In a word, this chapter provides a foundation for the development of the research focus and questions.

2.1 Terms about the Mandarin language

While the Mandarin language can be spoken in many different forms, such as Wuyu and Cantonese, Mandarin emerged as the dominating language during the later Ming Dynasty (1368-1644). From this perspective, Mandarin, which is based on the Beijing dialect, became the official language of China after Beijing was chosen as the capital of People's Republic of China in 1949. Specifically, the official spoken Mandarin which is known as 'Hanyu' or 'Putonghua', belonged to the Sino-Tibetan region (Coblin South, 2000). In this context, Mandarin can be used to refer to Mandarin in the whole. As a result, the teacher-researcher used the term Mandarin in the whole text instead of Mandarin.

According to Gass (2013), second language learning is the process of acquisition of another language after the native language has been mastered. A foreign language is acquired in the environment in which the learner speaks their own mother tongue.

Therefore, the term CFL is preferred in this paper to refer to Australian students learning Mandarin in their home country.

The choice of learning a foreign language is often made under different circumstances. In some cases, many learners have no choice but to accept it. Thus, for learner like that, learning foreign language is against their own will. For example, students in many school might be required to learn a foreign language and pass exams. For other learners who would like to seek higher education abroad or do business with foreigners, they are more proactive in learning language (Long, 2015). For instance, English is required as a foreign language-learning course for students across China. In today's society, not only students but also many staffs in banks, hotels, airlines, post offices and other work places are required to be capable of speaking English. In terms of Mandarin, more recently, policy makers are striving to make Mandarin available and learnable for monolingual English-speaking learners in the UK (Li & Zhu, 2011, Zhang & Li, 2010, as cited in Singh & Han, 2014), the USA (Zhang, 2010, as cited in Singh & Han, 2014), and Australia (Australia in the Asian Century Implementation Task Force, 2012; Australian Curriculum, Assessment and Reporting Authority, 2011). Such intensified demands in policies demonstrate that Mandarin has gained greater status in the world and there is a great need for English-speaking countries to make Mandarin learnable.

According to Lewis, Simons and Fennig (2015), Mandarin is the second most widely spoken language worldwide, with over 1.1 billion speaking Mandarin including 982 million native speakers. Figure 2.1 below is from the popular website, Statista (2016).

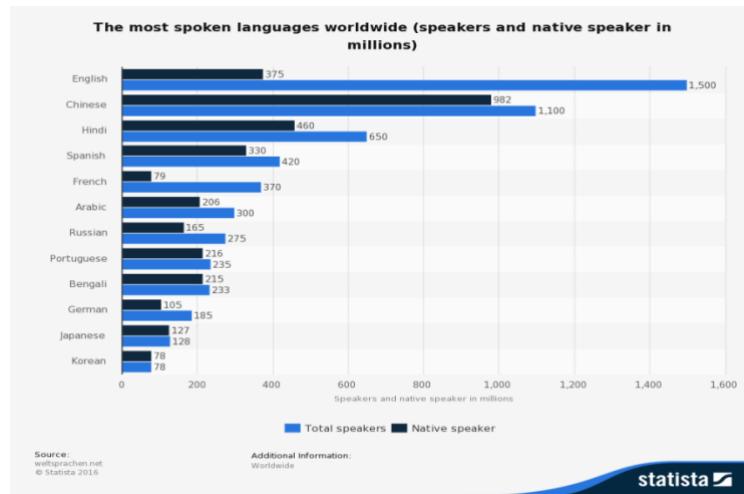


Figure 2.1 The most spoken languages worldwide()

2.2 Mandarin language policy in the US, UK and Australia

2.2.1 The Mandarin language policy and education in the USA

According to the USA Language Framework Language Policy (National Security Education Program-NSEP, 2016), a strong statement endorsed by the Committee for Economic Development (CED), which involved over 200 business leaders and educators, was made the 2006 “Education for Global Leadership” conference. One of the recommendations in the CED statement was expanding the training approaches of foreign language learning at every level of education, particularly for “critical languages”, like Mandarin. Thus, incentive programs are created to serve this purpose. The STARTALK program supported by National Intelligence is a good example. It is a program aimed at stimulating and maintaining language learners’ motivation during the study of target languages including Mandarin. In addition, under the cooperation between the Ministry of Education of the People’s Republic of China and the U.S. Department of Education, the U.S.-China E-Language Learning System and an innovative internet English and Mandarin language learning program “Chengo” were established. (Mandarin on the Go).

In 2009, American president Obama held a “town hall meeting” with university students in Shanghai, where he made a statement promising to send 100,000 American students to study in China in the following four years in order to study the Mandarin language, and deepen mutual cultural understanding (Chen, Wang & Cai, 2010). These initiatives show high level international support for the teaching of Mandarin.

2.2.2 The Mandarin language policy and education in the UK

The history of Mandarin language teaching and learning in the UK is lengthy. However, the UK reexamined its foreign language policy and education in recent decades (Zhang & Li). In the article, *Mandarin Language Teaching in the UK: present and future* (Zhang & Li, 2010), Zhang and Li analyzed policies on language, particularly Mandarin language in the UK. At the end of the twentieth century, the Higher Education Funding Council for England (HEFCE) issued a report about the status of Mandarin studies in the higher education sector (HEFCE, 1999, cited in Zhang & Li, 2010). The Mandarin and British governments reached a collaborative agreement on the development of Mandarin language education, containing a school exchange program facilitated by the British Council (BC). In February 2002, the Language National Steering Group, which was established by the Department for Education and Skills (DfES), released a green paper *Language Learning* (DfES, 2002a, cited in Zhang & Li, 2010). Then, *Languages for All: Languages for Life* in December 2002 (DFES, 2002b, cited in Zhang & Li, 2010), the national language strategy document, was published. The document aims to develop language education; establish a national language qualification framework; and change language learners from short-term education to lifelong education.

In addition, the UK’s demands for learning foreign language were illustrated through a strategic analysis report in the British government’s document *Language for the Future* prepared by Tinsley and Board in 2013. According to the report, the UK government failed to cultivate learners’ capabilities to learn foreign language. Interestingly, it

attaches the importance of language learning due to employability and enriching cultural understanding. Mandarin is one of the most crucial languages for the UK's development. As for learning it, this document suggests a "functional" focus should be the key (Han, 2017)

Since 2002, HSBC (Hong Kong and Shanghai Banking Corporation) and BC (British Columbia) have been organizing the annual conference on educational cooperation with China. The organization of the Mandarin Speech competition is one of the fruit of cooperation, which is a crucial event in CLT (Mandarin language teaching) for school education. Also, there are dozens of schools that offer Mandarin courses both in primary and high schools in UK. This shows the growth of Mandarin teaching in schools and is further evidence of the importance of making Mandarin learnable.

2.3 Why do Australians learn Mandarin as a foreign language?

There is no doubt that both the USA and the UK attach great significance to teaching and learning Mandarin as a foreign language due to economic globalization and the inevitable trend towards multilingualism all over the world. The Australia-China bilateral relationship also contributes to the demand for Mandarin language learning in Australia.

The Melbourne Declaration on Educational Goals for Young Australians (Ministerial Council for Education, 2008) formulated a goal (Goal 2) that aims to cultivate young Australians as successful learners, creative individuals and informed citizens. Being successful learners and informed citizens requires having basic skills in literacy, understanding and communicating across cultures, particularly Asian cultures. In addition, the Declaration made a commitment to action, promoting a world-class curriculum. Languages are involved in this curriculum, which illustrates that Asian languages, including Mandarin are a significant part of the Australian school curriculum. This statement reinforces the belief that research into methods of teaching Mandarin is crucial.

2.4 The current situation of TCFL

On the one hand, teaching Mandarin as a foreign language Teaching (TCFL) is gaining more and more attention in English speaking countries including UK, USA and Australia as discussed. On the other hand, teaching Mandarin as a foreign language to non-Mandarin- background learners is a fragile undertaking (Singh and Ballantyne, 2014, p.199). There are various reasons accounting for this, including the gaps between cultures, between teacher-centered methods and student-centered learning needs, and between impractical teaching material and learners' daily socio-linguistic activities.

In fact, the biggest challenge in CFL education is pedagogical method. (Moloney & Xu, 2015) According to previous teacher-researchers, relying on traditional educational methods to teach Australian students failed to produce positive results (Chen, 2015, p.934). A study of Mandarin student-teachers' practicum experience in Australian schools by Scrimgeour (2010) identified five main challenges that Mandarin native-speaking teachers encountered in Australian classes. They are unfamiliarity with Australian educational culture, low levels of learners' motivation, lack of responsibility to engage learners, inability to realize language learning strategies from the learners' perspective and low proficiency in English respectively. According to Chen (2015), there are more than 20,000 students enrolled in Mandarin learning programs in New South Wales (NSW). In NSW in 2011, out of 72, 391 Year 12 students who participated in HSC exams, only 1,091 (1.5%) sat Mandarin language exams (Herscovitch, 2012, as cited in Chen, 2015). Additionally, there seems to be a shortage of high quality Mandarin language teachers in Australia (Asia Education Foundation, DEEWR, 2010, McKay, 2000, Orton, 2008, Sturak & Naughten, 2010, as cited in Chen, 2015).

The different behaviours of background language learners and non-background learners can result from their different levels of motivation towards Mandarin language learning. For language learners with Mandarin background, they have access to get into Mandarin-speaking community. However, non-background learners have no

opportunities to be exposed to a Mandarin-speaking environment. As a consequence, non-background learners have fewer opportunities to apply what they have learned into their daily lives, which in turn affects their motivation. In addition, for non-background learners, there is almost no domain outside school in which Mandarin is more appropriate to use than English or their own languages. Therefore, they are reluctant to learn Mandarin. The lack of learning motivation is perceived as a major challenge for teacher-researchers, propelling the researcher to find more credible methods to teach Mandarin as a foreign language and highlight Vygotsky's important ideas of scaffolded learning, which will be discussed in 2.5

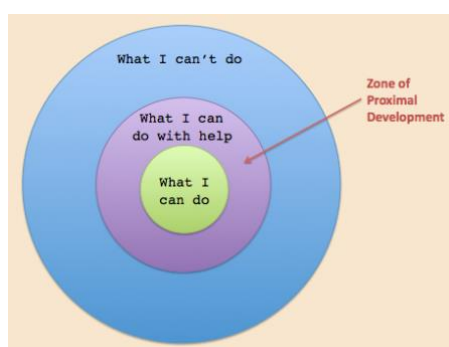


Figure 2.2 Zone of Proximal Development

2.5 Teaching strategies

Since there are numerous challenges existing in CFL teaching, effective strategies need to be developed to make Mandarin learnable. Thus it requires a focus on learners' learning styles. Gilakjani (2012) stated that having a better knowledge of learning styles has great significance, because it may help learners become attentive and effective. In addition, having a clear understanding of learners' learning styles, teachers can match different learning style with corresponding tasks. Identifying learning styles improves learners' comprehensive learning results, changes learners' attitude and willingness to learn new language.

Vygotsky's ideas of scaffolded learning should be noticed. Vygotsky stated that a young learner follows an adult's example or visual material such as videos, and then gradually develops the ability to do certain tasks without assistance. Vygotsky's often-quoted definition of zone of proximal development presents it as "the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult assistance, or in collaboration with more capable peers."

Vygotsky (1980) among other educational professionals believes the role of education to be to provide young learners with experiences which are in their ZPD, thereby engaging and advancing their learning.

The concept of ZPD has been expanded, modified, and changed into new concepts since Vygotsky offered the original conception. The concept of scaffolding is closely related to the ZPD, although Vygotsky himself never mentioned the term; instead, scaffolding was developed by other sociocultural theorists applying Vygotsky's ZPD into educational contexts. Scaffolding is a process through which a teacher or more competent peer gives aid to the student in her or his ZPD as necessary, and tapers off this aid as it becomes unnecessary, much as a scaffold is removed from a building during construction

2.6 Will visual pedagogy be a solution for Mandarin language learning?

Jensen (2001) argues that "the arts enhance the process of learning by nourishing the sensory, attentional, cognitive, emotional, and motor capabilities systems connected to learning" (p. 2). Given the significance of visual pedagogy and visual literacy in modern education, particularly in language education, visual pedagogy and visual literacy have great importance in this study. Visual modes of learning and visual features of Mandarin language are reviewed in this section. Kemp and Dayton (1985, as cited in

Ramirez Garcia, 2012) stated that visuals can promote learners' motivation and maintain their attention during the process of language learning. Based on this review, visual pedagogy is proposed for the teacher researcher to explore in her Mandarin class as part of the action research.

2.6.1 Visual mode of learning

Owing to visual materials have great significance in people's daily life, visual learning is not something new. From the Palaeolithic cave paintings to Egyptian hieroglyphics, to the visual language used in our modern-day world, it is clear that the whole society has always been visual. Educational researchers have studied visual learning and visual literacy in recent years. Burmark (2002) argues that this is the age of the image, and the dominating literacy of the 21st century is visual: images, graphics, pictures in any form. There is no doubt that visual literacy is playing a significant role in the education field. The presence of visual materials in today's teaching and learning is increasing as is shown by the integration of pictures and other visual presentations with text in textbooks, instructional manuals, classroom presentations, and websites (Benson, 1997; Branton, 1999; Kleinman & Dwyer, 1999, as cited in Stoks, 2002). In modern education, visual materials including pictures have even become an integral part of communication (Burmark, 2002, p. ix). In brief, visual learning can be used as an important tool to help learners understand complicated information and abstract concepts. Eisner (1972, as cited in Duncum, 2004) made the seminal claim that visual art offered a figure of human experience that was not only a unique way of knowing but also unique content.

Barbe and Milone (1981, as cited in Gilakjani, 2012)) found that for primary school children, the most frequent modality strengths are visual (30%). As for the visual learners, Schneck (2005) stated that approximately 70% of the sensory receptors are connected to vision. As a result, using visual materials enables them to catch most of their information through vision, and these visual materials, including colourful still

pictures and animated pictures and objects, are the best materials to help them to learn. Therefore, visual pedagogy is widely applied in various disciplines. Visual pedagogy is defined as a teaching method which implements methodologies intimately connected with the audio-visual paradigm and encourages learners' visual literacy in the classroom context through the use of visual representations (Goldfarb, 2002).

Grandin (1995), an autistic and introverted author, describes himself as a visual learner:

I think in pictures. Words are like a second language to me. I translate both spoken and written words into full colour movies, complete with sound, which run like a VCR tape in my head. When somebody speaks to me, his words are instantly translated into pictures (p. 19).

This doesn't mean that people on the autism spectrum are the only ones who think in pictures (Sword & Director, 2000). According to Sword and Director (2000), Dr Linda Silverman, who identified two types of visual spatial learners, is the pioneer of the concept "Visual Spatial Learner". Visual spatial learners have excellent ability in visual spatial processing and mostly think in pictures.

As Schneck stated, visual learners have a process of visual cognitive. Visual-cognitive process refers to the process of interpreting visual materials in a mind. The visual-cognitive process involves visual attention, a selection of visual materials; visual memory, the integration of visual information with previous experiences; visual discrimination, the ability to identify features of visual materials for recognition, matching and categorization; and visualization, which will be discussed in the section 2.6.4.

According to Tissot and Evans (2003), visual materials can be divided into two types: one mainly relies on movement, and gesture, which can be called three-dimensional representations as well. The other one includes external materials such as pictures and

objects. These can be regarded as two-dimensional representations, which is mainly used in this research.

2.6.2 Visual literacy and visual pedagogy

It seems that visual literacy is a term whose definition develops constantly. Visual literacy was originally regarded as the ability of someone to discriminate and interpret the visuals encountered in the environment as fundamental to learning (International Visual Literacy Association, as cited in Tillman, 2012). Later, visual literacy was defined by Braden and Hortin (1982) as “the ability to understand and use images, including the ability to think, learn and express oneself in terms of images” (p. 38). The reason for promoting visual learning and visual literacy is to develop human abilities, ideas, and teaching strategies (Avgerinou & Ericson, 1997)

As Ausburn & Ausburn (1978, as cited in Serafini, 2014) demonstrate, visual literacy involves a set of skills enabling an individual to understand and use visual images to communicate with others. However, according to Avgerinou and Ericson (1997, p. 284), visual learning can develop learners’ “use of visuals for the purposes of communication; thinking; learning; constructing meaning; creative expression; and aesthetic enjoyment”. As Avgerinou developed this theory, similarly, she defined visual literacy as a group of acquired abilities “to understand (read), and use (write) images, as well as think and learn in terms of images” (Avgerinou, 2009).

More recently, in the document published by the Association of College and Research Libraries(ACRL) (2011), visual literacy is described specifically as follows:

Visual literacy skills equip a learner to understand and analyze the contextual, cultural, ethical, aesthetic, intellectual, and technical components involved in the production and use of visual materials. A visually literate individual is both a critical consumer of visual media and a competent contributor to a body of shared knowledge and culture. (ACRL, 2011)

Visual pedagogy and students' visual literacy aim at helping students to understand the diversity of texts including print and non-print texts. It is also a practical way to make visual connections to link students' abstract and concrete thinking. To demonstrate, in some K-12 and higher education standards, visual literacy is identified as one of several key literacies needed for success in contemporary society. However, standards outlining of students' learning outcomes around interdisciplinary visual literacy in higher education have not been articulated.

In the article *Visual Art and Literacy*, Cramer (2014) initiated a 12-week program including literacy lessons with art images. Firstly, students engaged in reading various genres of books ranging from picture books to more challenging books, and a new vocabulary was initially introduced through visual images and videos. Students kept evolving journals that visually represented their comprehension. After preparing students to read with relevant visual images, students read an assigned passage and noted their ideas and what they remembered. Then students were also asked to draw a picture of their own attitudes towards reading and title it as a pre -and -post illustration of attitudes towards reading. Most of them held negative attitudes towards reading before the program and positive attitudes afterwards, which led Cramer to conclude that arts can develop the thinking dispositions and language potential of visual learners who endeavor to transfer the construction of meaning from the text world to their visual world.

Ramirez Garcia conducted a case study (2012) at Margarita Salas Secondary School on visual aids in the English classroom, aiming to demonstrate that multimedia visuals integrated in the lesson provoked a change in the dynamics of the language classroom. She adopted methodologies of survey, interview and direct observation to collect data. The study demonstrated that students were in need of visual aids in language classes. According to Bamford (2003, as cited in Ramirez Garcia, 2012), it must be taken into

account that visual literacy is the key to gaining information, constructing knowledge and building successful educational outcomes.

Visual materials or anything useful to help the student see an immediate meaning in the language may benefit the student and the teacher by clarifying the message, if the visuals enhance or supplement the language point, as Canning-Wilson (1999) indicates in her work. In addition, visual materials are effective to facilitate students' vocabulary mastery, as Marzuki (2015)) stated. Visual materials generally contain two-dimensional and three-dimensional representations of particular concepts, including pictures, cartoons, photographs and gestures that facilitate the understanding of spoken words. The use of visual systems can enhance students' understanding and learning. In this research, visual pedagogy refers to developing visual strategies based on various visual materials. Visual materials cover pictures, videos, objects, booklets and three-dimensional visuals that include mime, mouthing words and facial expressions. Based on these visual materials, the teacher-researcher developed some visual strategies, which can be mainly divided into two types: using visual materials in a different way and visual materials based activities. Students could form the visual-cognitive learning process including attention on visual materials, visual memory of the visual materials with previous knowledge, discrimination of visual materials and visualization under the stimulation of visual materials. The teacher-researcher aimed at exploring effective visual pedagogy to engage students, making Mandarin more learnable.

Briefly, in the 21st century, visual imagery is no longer supplemental to other patterns of information. In fact, there are numerous books and articles about visual literacy in terms of art education and culture. However, there are few books and articles about visual literacy and visual pedagogy in teaching Mandarin as a foreign language. Mandarin visual features, both internal and external, help to reinforce the current visual pedagogy.

2.6.3 The function of visualization in L2 learning

Visualization, or visual imagery, is another very crucial comprehension instrument that students need to learn and use independently in their language learning, especially in vocabulary acquisition. When they form pictures, and visualize contents of what they read in their minds, students are better to remember and understand words and texts and have long-standing memories (Gambrell & Jawitz, 1993, as cited in Woolley).

Ghaedi and Shahrokhi (2016) conducted research on the impact of visualization and verbalization in language learning. In their study, there was a comparison between two groups. One group of students learned English facilitated by visualization, and the other group learned English with the help of verbalization. The results of this study revealed that both visualization and verbalization can lead to improvement in students' English learning, particularly in learning vocabularies. What is worth noticing is that visualization in language learning can offer more help in learning vocabularies than the verbalization approach does.

The use of visualization in the present study are in accordance with those of previous studies (e.g. Lee, 2012; Hashemi and Pourgharib, 2013; Joklova, 2009; Marzuki, 2015). Who came to the conclusion that students' L2 knowledge, focusing on the aspect of vocabularies, would improve when they received vocabulary instruction through visualization (Ghaedi and Shahrokhi, 2016)

Carpenter and Olson (2012) explored the effect of teaching new words in a foreign language through pictures. Their results indicated that pictures can facilitate learning of foreign language vocabulary. In another study, Elsy and Novita (2013) tried to study the effect of picture media on vocabulary achievement of third grade students in Bengkayang. They found that the command of vocabulary was influenced significantly by teaching and learning through the pictures technique (Ghaedi & Shahroki, 2016).

To becoming an effective self-regulating learner, visualization is a potentially powerful tool use, which also can greatly increase the efficacy of one's other language learning strategies. In "The L2 Motivational Self System," Zoltán Dörnyei(2009a), arguably the foremost expert on motivation and foreign language learning, reviews a large body of research that confirms the positive role visualization can play in personal performance.

In an Iranian context, Hashemi and Pourgharib (2013) investigated the effect of adopting pictures and other visual aids in teaching vocabulary. Their results showed that pictures attracted the students' attention and led to better learning. In addition, they made a conclusion that when students associated a new vocabulary with a visual material such as pictures, it would become easier for them to understand and memorize the meaning of the words.

Arnold (1999, Eggen & Kauchak (1999) and Nakaji (1991, as cited in Lee, 2012) stated that the visualization is a technique which leads learners to build mental images and pictures in the mind's eye triggered by what they read or listen to for certain purposes. The mental image refers to a non-physical picture which people create in their minds but can not be drawn on papers, and it is a combination of what they recognize, as a result of the interaction between what they see or hear and how it can be expressed through pictures.

According to Lee (2012), visualization has close connection with physical visual materials. Physical visual materials are usually used to stimulate visualization including pictures, real objects, drawings, photographs and videos. She also stated that audio materials can also trigger visualization as individuals try to listen with their imagination. For instance, music, including instrumental music and pop songs from different cultures, can be used for many different purposes. Story-telling videos and even natural sound recordings can be adopted in the language teaching lesson. Another material source is three dimensional visuals in the class, such as facial expression, role-play activities, mime, drama, mouthing words and dance, which can express personal understanding

about the target language terms and encourage various visual ways of explicit expression and understanding. In the research, the teacher-researcher used visualization to facilitate students' learning and used various visual materials including pictures and three dimensional visuals to trigger their visualization and engage them.

Visualization is clearly very useful in language learning. Lee (2012) claimed that visualization can help develop long-term memory and excite mental rehearsal. Visualization also helps learners to focus on meaning and how to express it by translating the mental picture into words. Tomlinson (1998, as cited in Lee, 2012) pointed out that visualization plays an important role in language learning especially reading, which can engage the learners both cognitively and affectively. To sum up, pictures including physical ones and non-physical ones are of great significance in language learning.

2.6.4 Visual features of Mandarin characters in calligraphy

Mandarin characters were originally drawn on stones or oracle bones, and those ancient Mandarin characters were recreated according to the configuration or shape of things in daily life. Hence their visual nature is a distinctive feature of Mandarin characters. Adopting visual pedagogy in Mandarin language education can improve learning of Mandarin characters by exploring the visual connections (Huo, 2010). Visual representations can consist of both concrete and abstract representations, which have internal and external connections with Mandarin teaching and learning. As a result, visual pedagogy is crucial in Mandarin teaching and learning, utilizing students' visual literacy to make Mandarin learnable.

To illustrate, pictographs are symbolized objects, which use simple and figurative strokes to represent the shape and outline of the objects. Therefore, these might be used in an early [topic](#) to reinforce growing understanding. The use of pictures can illustrate the development of the use of characters. There is close connection between visual materials including paintings and images, with Mandarin characters. The following figure shows examples of Mandarin characters of mouth, sun and moon derived from the shape and pictures for the mouth, sun and moon.



Figure 2. 3 Examples of pictographic characters: mouth-口, Sun-日, moon-月

2.7 Engagement

Student engagement is a multi-dimensional concept including behavioural engagement, emotional engagement and cognitive engagement (Munns & Woodward, 2006, Axelson & Flick, 2010, Appleton, Christenson, & Furlong, 2008, Zyngier, 2008, as cited in Qiu, 2013)

Student engagement is a very significant element, and it does not occur to students who do not participate well in the class or even drop out of their schools. According to Appleton et al. (2008) and Fridericks et al. (2004), (as cited in Lawson & Lawson, 2013), student engagement, which can be regarded as a social-psychological construct, consists of emotional, behavioural, and cognitive indicators. Engaging students in the class can facilitate teaching and learning efficiency. Student engagement is the glue and mediator, which links significant contexts such as home, friends, school and community to students and, in return, to outcomes of interest.

2.7.1 Emotional Engagement

Emotional engagement addresses students' affective response. Fredricks et.al (2004) referred it to "students' positive and negative reactions to teachers and their classmates". Researchers use the term affective or emotional engagement to describe students' social, emotional, and psychological attachments to school. For ease of analysis, these studies can be classified into two categories. The first kind of research examines students' affective engagement in relation to their academic pursuits. These studies assess students' levels of interest, enjoyment, happiness, boredom, and anxiety during academic activity (Ainley, 2012, Appleton et al., 2008, Pekrun & Linnenbrik-Garcia, 2012, Skinner et al., 2008, as cited in Lawson & Lawson, 2013). A second kind of research takes a broader, institutional view. In these studies, the focus is on students' feelings of belonging, identification, and relatedness to their school peers, teachers, and

the school overall (Daly, Shin, Thakral, Selders & Vera, 2009, Finn & Rock, 1997, Finn & Voelkl, 1993, Finn & Zimmer, 2012, Goodenow, 1993, Goodenow & Grady, 1993, Munns, Sawyer & Cole, 2013, Osterman, 2000, Van Ryzin, Gravely, & Roseth, 2009, Voelkl, 2012, as cited in Lawson & Lawson, 2013).

2.7.2 Behavioural Engagement

Behavioural engagement is considered as the representation of both emotional and cognitive engagement (Axelson & Flick, 2010, as cited in Qiu, 2013). Students' behavioural engagement can be assessed through their participation in the class and involvement in other learning activities. Some students could participate in class activities and discussions, some students could just do their own thing regardless of the class activities and discussions.

Reeve et al. (2004, as cited in Qiu, 2013) measured students' engagement by observing whether students were absent-minded or focused; whether students responded slowly, passively or quickly, or energetically; whether students kept silent or were active in whole class and group discussion; when students encountered failures or other trouble in learning, whether they tried their best to overcome them or just gave up immediately; whether students' tone was flat or joyful when speaking.

In addition, Sawyer, Munns and Cole (2013) raised the concept of "e" and "E". "e" refers to students' engagement in classroom and "E" refers to students' engagement after class. The following figure illustrates their idea of the "Fair Go Project" which shows the connection between "e" and "E".



Figure 2. 4 Links between "e" and "E"- "the future in present

In this research, the teacher-researcher measured students' behavioural engagement by observing students' performance, including their participation, responses and facial expression in classroom, through which the teacher-researcher can judge whether visual materials and visual strategies she used engaged the students.

2.7.3 Cognitive Engagement

Studies of students' cognitive engagement typically focus on students' psychological investments in academic tasks (Fredericks et al. 2004), which concern students' self-regulation, learning goals or investment in learning (Appleton, Christenson & Furlong, 2008, 370, as cited in Qiu, 2013). In the teacher-researcher's Mandarin teaching, students' cognitive engagement was observed through their questions for the teacher-researcher and their answers to the questions asked by the teacher-researcher.

2.8 Discussion

Foreign language acquisition is a complicated process, especially Mandarin. This Chapter reviewed basic terms about the Mandarin language and the relevant policies concerning its teaching in the UK, US and Australia. On the one hand, given the background of globalization and the relationship between Australia and China, the Mandarin language, mainly Mandarin has gained great popularity in Australia. On the other hand, there are numerous challenges existing in Mandarin teaching and learning. The basic challenge found by researchers is devising teaching strategies that engage students. As a result, the teacher-researcher intends to explore visual pedagogy with

Mandarin characters and images of Mandarin cultural life in CFL teaching, making Mandarin learnable based on the important visual materials and learners' learning modes.

Chapter 3 Research Methodology and Methods

3.0 Introduction

In this chapter, the use of Action Research in this study is introduced, involving both theoretical and practical content relating to the theme of this study. To begin with, it introduces the definition and traits of qualitative research and action research, and explain reasons why these researches are effective. Then a review of the major principles guiding research procedures is clarified. After that the specific research design is demonstrated, the teacher-researcher gives readers an explicit outline about the future implementation of the research. Finally, data collection and analysis is illustrated systematically since they are the basic source of this whole research.

Research Outcomes

This study aims at applying visual pedagogy in CFL teaching for non-Mandarin - background primary school students in Western Sydney. The qualitative method of data collection and analysis will be the fundamental method used in this research. Expected outcome of this research are as follows:

1. Designing and preparing a series of visual materials and visual teaching approaches that suits students' learning levels to assist students in learning Mandarin.
2. Developing visual pedagogy in CFL teaching and learning to make Mandarin learnable, which may contribute to the permanence of the learning content.

3.1 Qualitative Research

According to Denzin and Lincoln (2005, p.3, cited in Merriam & Tisdell, 2015), qualitative research is a situated activity that locates the observer in the world. It relies primarily on human perception and understanding, attaching great significance to subjectivity (Stake, 2010). Qualitative researchers endeavor to interpret phenomena in natural settings, and they are in quest of answers to ‘what’, ‘why’, and ‘how’ instead of ‘how often’ or ‘how many’. Meaning and understanding are the two key words in qualitative research.

Human activities and how people interpret their daily experiences are regular concerns in qualitative research. There are four principal characteristics of qualitative research listed below, as Stake (2010) claims:

- (1) It focuses on the meaning of human affairs as seen from different perspectives. It acknowledges the fact that findings and reports are the result of researcher-subject interactions.
- (2) It is experiential, and it emphasizes observations by participants.
- (3) It is oriented to objects and activities, each in a distinct set of contexts.
- (4) It is about people, and seeks for people’s points of view, structures of reference, and value commitments. The researcher is often the key research instrument.

In qualitative research, the teacher-researcher collects data to establish concepts, hypotheses or theories. The process of qualitative research is inductive rather than deductive, which tests hypotheses (Merriam & Tisdell, 2015). As a result, there is a possibility that the subjectivity of qualitative researchers could dominate over the facts.

As can be seen, the characteristics of qualitative research are more consistent with the content and aim of the teacher-researcher research. The teacher-researcher planned to conduct Mandarin language teaching, explore visual pedagogy and utilize students’ visual literacy in primary schools in Western Sydney. The attempt to apply visual pedagogy to Mandarin teaching is experiential; participants’ engagement and feedback

as well as the researcher's experience and reflection will be the crucial parts of the research foundation. The quest for effective approaches to inject visual education into Mandarin teaching in Australia, and the implementation of visual pedagogy, largely depends on participants' positions and the researcher's observation and thinking. As a result, this research was carried out mainly by qualitative research mixed with quantitative research presented in observation sheet. Meanwhile, in consideration of the limitation of qualitative research mentioned above, a meticulous research design will be established to minimize the negative effects that qualitative research may cause.

3.2 Action Research

Action research is prevalent in most fields of research, including educational research. In this section, the definition and credibility of action research will be introduced.

3.2.1 The definition of Action Research

The definition of action research is explained by Stringer (2007):

Action research is a systematic approach to investigation that enables people to find effective solutions to problems they confront in their everyday lives (p.1).

This is a general and concise definition of action research and it can be seen that action research is applied in daily life to solve problems effectively rather than in specific scientific fields. Another definition given by Mills (2014) is specific, as he pointed out:

Action research is any systematic inquiry conducted by teacher-researchers, principals, school counsellors, or other stakeholders in the teaching or learning environment to gather information about how their particular schools operate, how they teach, and how well their students learn. This information is gathered with the goals of gaining insight, developing reflective practice, effecting positive changes in the school environment (and on educational practices in general), and improving student outcomes and the lives of those involved (p.5).

In action research, the primary researchers are teachers, principals and other relevant staff in educational fields. As Pine (2009) claimed, in educational action research, teachers, the traditional subjects of research, conduct research based on their own situations and experiences in their classrooms and schools. According to Abdallah (2017), the crucial point of action research is that a practitioner gains improvement and solves one specific teaching and learning problem while observing outcomes in the classroom. From the language teachers' perspectives, action research is adopted to make improvement in their educational practices by deepening understanding of students' learning, experimenting with a variety of methodological alternatives, and critically examining and reflecting on teaching/ learning experiences (Sowa, 2009). In this context, action research aims to improve teaching approaches, focus on visual aids and facilitate students' Mandarin learning. This aim was a crucial guide for the researcher to conduct this research and develop effective Mandarin teaching methods. Pine (2009) claims that action research is a changeable, spiral and cyclical process of study, and is designed to reach a concrete improvement in a specific context, situation or working backgrounds to develop teaching and learning. Action research aims at making improvement, which contains three aspects: firstly, the improvement of a *practice*; secondly, the improvement of the *understanding* of the practice by its practitioners; and thirdly, the improvement of the *situation* in which the practice takes place (Carr & Kemmis, 1986, p.155).

In brief, action research attempts to solve teaching-related predicaments and improve educational approaches from the teacher-researchers' perspectives by conducting implementing and effective teaching processes.

3.2.2 Credibility of Action Research

Action research is credible because it provides rich detail of a specific setting. As Mills and Butroyed (2014) argued, action research is about integrating the daily teaching

routine with a reflective stance - the willingness to critically examine teacher-researchers' teaching methods in order to improve or boost it. This explanation is similar to Kemmis' ideas. Kemmis (1986, as cited in Dai, 2012) claimed that the aim of action research was to develop knowledge systematically in a self-critical community of practitioners. Hence, the researcher's experience of teaching, in particular makes action research credible. The level of Mandarin language teaching and visual-material designing will be improved by self-critique. In addition, in order to gain deeper understandings and improvement, teacher-researchers are supposed to: link prior knowledge to new information; learn from experience, including failures; ask questions and find answers (Fueyo & Koorland, 1997, cited in Milles & Butroyed, 2014).

The researcher kept a reflective journal, discovering problems and flashpoints that were hers and her students' in the process of teaching and learning Chinese. Based on prior knowledge, experience of teaching CFL and her journals renewed by knowledge, the researcher improved her teaching by asking questions and finding answers.

The most important three categories of action research are engaging, extending, and transforming the self-understandings of practitioners. In the light of practical consequences, practitioners need to theorize their own practice directly and revising their theories self-critically in the process of action research (Kemmis, 1986, as cited in Dai, 2012).

It is a guide for teacher-researchers to accomplish both their teaching and research. Kemmis and McTaggart (1988) explained the cycles of self-reflection as follows:

- **Planning:** to develop a plan of critically informed action to improve what is already happening.
- **Action:** to implement the plan.
- **Observation:** to observe the effects of the critically informed action in the context in which it occurs.
- **Reflection:** to reflect on these effects for further planning, subsequent critically informed action and so on through a succession of cycles.

(Kemmis & McTaggart, 1988, p. 10)

According to this explanation, to launch an action research, a complete scheme regarding the research plan should be established and implemented in advance. Observation is a necessary core link between the practice and the research. It enables the researcher to fully participate in the process of the practice of teaching and collect effective information in the classrooms, which lead to the next step after the class: reflection. Reflection is the key process through which the researchers analyze all the work that has been done, and transform it to renew their research for developing their practical teaching.

Other researchers have also discussed the action research cycle. According to Efron and Ravid (2013), there are six steps to implement a full cycle of action research:

- Identifying an issue or a problem the practitioner wants to explore.
- Gathering background information through a review of appropriate literature and existing research on the topic.
- Designing the study and planning the methods of collecting data.
- Collecting data
- Analyzing and interpreting
- Writing, sharing, and implementing the findings.

(Efron & Ravid, 2013. p.10)

The researcher's major research question was: How can a visual method be developed to make Mandarin learnable for primary school learners in the Western Sydney Region? Her teaching implementation was regarded as the practice. Interviewing, observation, collecting visual data and writing the self-reflection journal, can be considered as the process of data collecting. Analyzing various data and self-reflection contributed to the improvement of the teacher-researcher's teaching and the discovery of new problems in teaching. The researcher's conduct was modified in lessons and research continued in the cycle again. Hence, adopting action research helped the researcher to constantly moderate her teaching, making Mandarin learnable for students. As Mills (2014) argued,

teachers are supposed to hold that the improvement of the teaching process can and should be settled by making data-based decisions that are validated through action research. Therefore, from the teacher-researcher's perspective, conducting an action research was highly suitable in this particular study. The teacher-researcher undertook the research based on the cycle of action research according to Efron and Ravid (2013), and put tremendous emphasis on the self-reflective spiral proposed by Kemmis & McTaggart (1988).

3.2.3 Prolonged Engagement

The action research took the teacher-researcher two terms, about twenty weeks. The teacher-researcher was allocated to a public school every Wednesday, delivering Mandarin lessons, reflecting on her own teaching, observing students and getting feedback both from the classroom teacher and students. It is a prolonged process rather than just a short-lived research, which helped to contribute to the trustworthiness of the research.

3.3 Ethical principles, guiding research procedures

There are two key issues that need to be considered in action research: Ethical consideration and triangulation. In this section, a brief introduction of ethical considerations and triangulation will be involved, and the connection with the research will be presented.

3.3.1 Ethical Consideration

Ethical considerations are valued to protect the well-being and interests of research participants (Stringer, 2008, p. 44). Schnell and Heinritz (2006, as cited in Flick, 2014) listed the principles of research ethics as follows:

- Researchers have to be able to justify why research about their issue is necessary.
 - Researchers must be able to explain what the aim of their research is and under which circumstances subjects participate in it.
 - Researchers must be able to explicate the methodologies and procedures in their projects.
 - Researchers must estimate the potential ethically relevant positive and negative consequences and the potential damages arising from doing this research for the participants.
 - The researchers must not make false statements about their research.
- (Schnell & Heinritz, 2006, cited in Flick, 2014)

Action researchers are supposed to have a comprehensive understanding of their research and be aware that permission from participants is necessary. Informed consent confirms that research participants participate in the research of their free will and with knowledge of the study and any possible dangers that may appear (Mills & Butroyed, 2014). In this research, the teacher-researcher prepared information sheets and consent forms for the classroom teacher in the Year Five and Six class M public school, and these students' parents or cares before starting the research. All participants knew well about the teacher-researcher's research through information sheets (See Appendix 7 and Appendix 8) and students who participated in the research must had their parents' or cares' consent (Consent forms see Appendix 9 and Appendix 10). Also, the teacher –researcher had the HERC approval and SERAP approval (see Appendix 5 and Appendix 6). This means the process of the research was open and transparent and ethical.

Another crucial ethical issue is anonymity and confidentiality related to the participants in writing about the research. Using anonymity and confidentiality can avoid potential

privacy invasion and harm (Mills & Butroyed, 2014). Moreover, the teacher-researcher must be objective and do justice to participants in the process of data analysis.

In this study, the majority of participants were primary school students and teachers from M public school (which is an alias). Informed consent was invited from parents/cares and from student participants before starting the research. During the research, the researcher will ensure participants' confidentiality, using pseudonyms to conceal participants' identities and protect their privacy and safety, which makes it impossible for others to identify the participants or use participants' private information against the interest of the participant (Flick, 2009, cited in Dai, 2012).

3.3.2 Triangulation

In research terms the desire to use multiple sources of data is referred to as triangulation, which generally is applied in action research circles through interview, observation (Mills, 2011), and reflection combining data with theoretical perspectives (Flick, 2009, cited in Dai, 2012). Triangulation enables researchers to have a deeper understanding of their study and makes research more valid.

There are four types of triangulation as Flick (2014) pointed out. One is data triangulation referring to the use of various data sources (Flick, 2014). Another one is methodological triangulation with different methods. Here in this research, the researcher utilized these two types of triangulation to carry out the research. The researcher gathered data from three groups of people, including students and classroom teachers from one class, Year Five and Six combined in M public school, and the researcher herself, as a teacher-researcher. Sources from these three perspectives can be applied adequately and lay a solid foundation of this research. In terms of methodological triangulation, the triangular data is collected from visual data,

interviews and the self-reflective journal as mentioned before. The use of various approaches to collecting data can contribute to the validity of the research.

3.4 Research design

The main research question in this study was: How can a visual method be developed to engage student learners in the Western Sydney Region to make Mandarin learnable in speaking, writing and understanding? As a result, the research-design emphasized the development of Mandarin teaching strategies based on the visual materials.

3.4.1 Site selection

As a volunteer teacher-researcher, the researcher is a participant of the Research Oriented School Engaged Teacher Education (ROSETE) Program and teach Mandarin in the Western Sydney Region at the same time. M public school, as one of the partner schools of the ROSETE program, was selected as the research site. This public school attaches highly importance to Mandarin learning and is willing to have Mandarin teachers, which strongly supports the researcher to implement the action research.

One class: Year Five and Six combined was involved in this research. Other classes: Kindergarten Blue and Purple, Year One and Two, and Year Two and Three, and Year Three and Four have Mandarin class as well. The teacher-researcher, as scheduled, taught one lesson for 45 minutes per week in senior grade classes and 30 minutes in junior grade classes. Considering the validity of data in the research, the teacher-researcher collected data from students in the class Year Five and Six as they were more mature to give opinions. The research lasted for two consecutive terms. Since the researcher was a volunteer teacher-researcher, the research was conducted with the assistance of the classroom teachers of these classes.

3.4.2 Participants

In this research, three groups of participants were involved: the classroom teacher, the teacher-researcher and Year Five and Six students: Twelve students voluntarily participated in focus group, which will be discussed later. Most students are Mandarin beginners with non-Mandarin background and two students are Mandarin, and students are from different cultural background. According to the classroom teacher of Year Five and Six, students have learned a little Mandarin through Internet courses before. Basically, the students who participated in the research are Mandarin beginners.

The other group is the classroom teacher in Year Five and Six. The classroom teacher was highly engaged in the Mandarin class, observing and assisting the researcher's lessons. Her feedback and suggestions were valued as resource worthy of being part of this research.

As for the teacher-researcher herself, she is a central participant in this research, by whom the lessons were delivered and the research was conducted. In addition, the researcher's self-reflective journals were used as data sources in this research as stated above.

3.4.3 Cycle Design and Implementation

Action research is meant to provide the teacher- researcher with a method for solving everyday problems in schools so that they might improve both student learning and teacher effectiveness (Gay, Mill, & Airasian, 2008, p.486). Before the research cycles commence, the teacher-researcher will implement lessons that use traditional teaching methods for Mandarin and conduct a simple quiz to assess student retention of learning.

In Term 2, the cycles will commence, being of eight weeks' duration. These are shown below, superimposed on Zuber-Skerritt's (2001) diagram as follows:

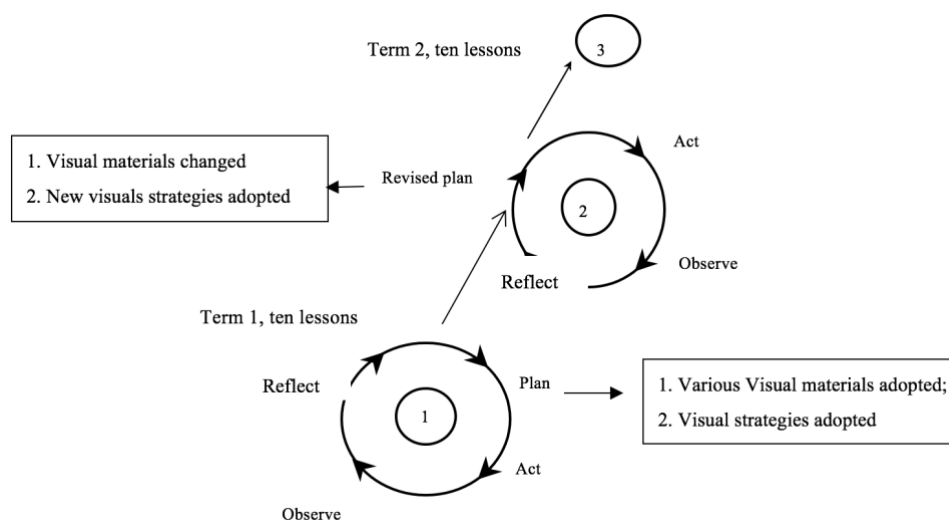


Figure 3.1 Research Spiral 2001 (adapted to show cycles of 10 weeks)

As this diagram illustrates, action research is divided into numerous cycles, each of which contains four steps: planning, acting, observing and reflecting. The cycle of action research is a spiral and each cycle facilitates the development and perfection of the next cycle.

This research was divided into two cycles and each cycle lasted about ten weeks. As a result, in this research, Cycle1 was in Term 2; it introduced new Mandarin vocabularies through connections with Mandarin calligraphy and different visual materials including pictures, videos with Mandarin culture. The teacher-researcher used various visual materials and tried several visual strategies to engage students and consolidate their learning. Cycles 2 ended in Term 3 and extended on the new vocabulary with a change of visual materials and expand of new visual strategies, facilitating the students to acquire more vocabularies and encourage them to make simple conversation. Besides using visual materials, the teacher-researcher also arranged time for students to draw,

writing and to do other visual related activities. Meanwhile, the teacher interviews were conducted (see Appendix 3)

The teacher-researcher adopted visual pedagogy in Mandarin lessons in two cycles devoted to the improvement of her teaching according to the previous cycle. Each term contained ten lessons and some lessons were conducted in conformity to visual strategies with various visual material. Several lessons were conducted as practice and consolidation. Students were asked to draw pictures, colour in based on their imaginations and Mandarin words they had learnt. In addition, the teacher-researcher delivered hand-on activities, such as watching and making dumplings, which were visual related for students.

Prior to each term, the researcher planned the contents of the whole term, and designed and prepared visual materials from the students' perspective. Each lesson the researcher conducted was regarded as the process of *Action*, while the action of interviewing students and classroom teachers was considered as the process of *Observation*. Also, the researcher collected visual data from students in several lessons. After these tasks were finished, the researchers made a conclusion of the cycle and wrote a reflection to overview and analyze the former cycle, which contributed to the plan for the next cycle. Theme analysis was used to analyse the data of student-focused groups. The analysis of the children's visual data and performance was compared with the stimulus of visual materials and visual strategies. The design of each cycle the teacher-researcher conducted can be demonstrated in the diagram below:

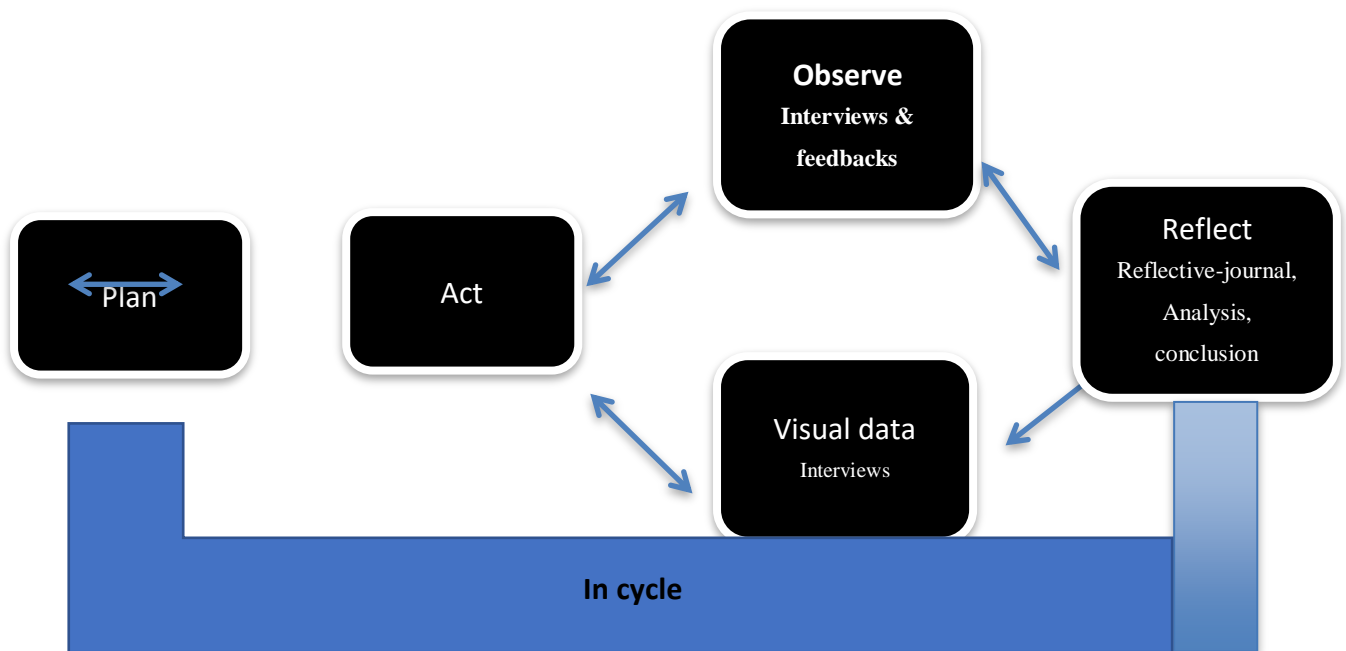


Figure 3.2 Cycle of Action Research

According to this diagram, the processes of the teaching and the research are explicitly demonstrated and two cycles, as stated before were implemented. Analysis is shown as part of the final box in Figure 3.2 above. The questions for teacher and students are shown in Appendixes 1 and 2. In the Figure, each cycle forms the basis of the following cycle. To sum up, it is a process of spiral cycle, and alterations and improvements are achieved continually through the former cycle and reflection.

In the first cycle, Term 2, the teacher-researcher designed two booklets and taught students about traveling and shopping. The first step was lesson planning. The teacher-researcher used UBD: Understanding By Design, Wiggins and McTighe's (2005) pattern in order to make Mandarin lessons more logical and reasonable. The design actually is backward, starting from the desired results. It contains three stages: Stage One-Desired Results, which are all based on the specific Mandarin syllabus for NSW; Stage Two-Assessment Evidence, which includes students' performance in class, and

the teacher-researcher's observation. Stage Three- Learning Plan. The template is demonstrated as follows (table 1):

Table 1. UBD template

Stage One-Desired Results	
Goal (s):	
Understanding(s): <i>Students will understand that</i> ●	Essential Question (s): ●
Students will know: ●	Students will be able to ●
Stage Two----Assessment Evidence	
Performance Task(s): 3)	Other Evidence: ●
Stage Three-Learning Plan	
4)	

Wiggins, McTighe (2005)

The following is an Example of the teacher-researcher's lesson planning.

Table 2. An example of UBD temple used in Mandarin teaching

Stage One-Desired Results	
<p>Goal (s): 1. Review these words about food in Mandarin: hamburgers, sandwiches, Italian noodles, dumplings, fried noodles, fried rice and wonton. A student can remember these words</p> <p>2. A student learn how to order food with a simple sentence in Mandarin</p>	
<p>Understanding(s): Students will understand that</p> <ul style="list-style-type: none"> ● There are some similarities and differences in ordering food and in China and Australia. ● Mandarin food is delectable and colourful. There is various Mandarin food. 	<p>Essential Question (s):</p> <ul style="list-style-type: none"> ● Do you still remember the food words we learnt last week? ● How do you order food when you are in a restaurant? ● Look at the video, and then tell me which of the Mandarin foods we've learnt about are in the video and how to order food in a Mandarin restaurant.
<p>Students will know:</p> <ul style="list-style-type: none"> ● Words for hamburgers, sandwiches, Italian noodles, dumplings, fried rice, fried noodles and wonton in Mandarin. ● How to order food in Mandarin restaurants 	<p>Students will be able to</p> <ul style="list-style-type: none"> ● Remember these words. ● Know more about Mandarin food and China. ● Order food with a simple sentence in Mandarin.
Stage Two----Assessment Evidence	
<p>Performance Task(s):</p> <ul style="list-style-type: none"> ● Students' performance in the competition task. ● Note taking and question answering. 	<p>Other Evidence:</p> <ul style="list-style-type: none"> ● Response to these words in my spoken Mandarin ● Class engagement. ● Classroom teachers' observation and feedback.
Stage Three-Learning Plan	
<ul style="list-style-type: none"> ● Warm-up & Review: Ask students what they've learnt last week. Show students the pictures of food and review them. ● Warm-up 2: Show students a video about ordering food in Mandarin restaurants, review Mandarin food again and ask students how to order food in Mandarin. 	

With regard to the implementation of the lessons, the teacher-researcher prepared various visual related materials including numerous copies of printed pictures, booklets, objects, videos, and etc. The main visual materials the teacher-researcher adopted in Cycle One will be discussed in Chapter 4.

Based on the visual materials the teacher-researcher used in her teaching, she adopted and developed different visual strategies in Cycle 1 according to her own reflection, the classroom teacher's suggestions and students' feedback, which will be discussed in Chapter 5.

As for data collection, the teacher-researcher adopted semi-structure interview to interview the Year Five and Six classroom teacher, and a focus group to interview twelve Year five and six students, which will be discussed in 3.5.2. Meanwhile, the teacher-researcher kept field notes, filled in her observation tables and kept a reflective journal as well.

3.5 Data collection

Data is the foundation of the research. Therefore, the process of data collection is crucial. In this section, the teacher-researcher emphasizes three approaches of data collection: visual data collection, interview and the self-reflection journal.

3.5.1 Visual Data

Since the teacher-researcher conducted lessons with visual pedagogy, visual data plays a significant role in this research. Visual data generally refers to students' visual worksheets. In this research, the teacher-researcher collected visual data from students, which are their paintings in the class. As declared before, the teacher-researcher arranged time for students to draw and colour-in based on Mandarin words and

instructions. Some students in the focus group also drew pictures of the teacher-researcher. These pictures clearly displayed whether students have fully understood the Mandarin words they had learnt and their attitudes towards Mandarin lessons. Also, some students in the focus group drew pictures of the teacher-researcher representing their attitude towards Mandarin learning, which will be discussed in Chapter 6.

3.5.2 Interview

The interview is a crucial data collection strategy in teacher action research, which provides an opportunity for in-depth conversations between teacher-researchers and other participants involved in the research (Efronv& Ravid, 2013). It is a reflective process that enables the interviewee to explore his or her experience in detail and to reveal the many features of that experience that have an effect on the issue investigated (Stringer, 2007, p. 69).

Interviews can be divided as: unstructured interviews, semi-structured interviews and structured interviews. In this research, the teacher-researcher selected the semi-structured interviews as a tool to be the main resource of data collection. She prepared several questions both for students and the classroom teachers (See Appendix 1 and Appendix 2) and had further questions for students' worthy points.

3.5.2.1 Semi-structured interviews and narrative interviews

The semi-structured interview is based on the questions that were prepared prior to the interview (Efron& Ravid, 2013, p.98). The questions prepared for semi-structured interview are open-ended. The interview plan of semi-structure interview can involve the following:

- Introductory comments;
- List of topic headings and possibly key questions to ask under these headings;
- Set of associated prompts;

- Closing comments.

(Robson, 2007, p. 278)

Researchers are supposed to prepare possible questions related to the study prior to the interview, and instruct interviewees to answer the key questions freely.

“Generative narrative questions” are commonly used in a narrative interview. (Riemann and Schutze, 1987, p.353, cited in Flick, 2014). This “generative narrative question” will indicate the topic of the study and elicit the interviewees’ core narrative (Flick, 2014). Researchers are enabled to use narratives produced by interviewees as an integrated element in semi-structured interviews (Flick, 2014). As result, narrative interviews will be conducted in the process of visual data collection in this research. Ten students (in a focus group) will be selected to interpret their paintings willingly in the form of a narrative interview to assist the researcher to form a better understanding and interpretation of the visual data.

In this research, the classroom teacher in Year Five and Six was interviewed in the form of the semi-structured interview. She was familiar with these students and the teacher-researcher’s teaching since she was present in all of the researcher’s lessons. Furthermore, the classroom teacher was an experienced teacher who could provide constructive advice pedagogically. Therefore, she could be a valuable source for this research. Questions for the classroom teacher were mainly about the students’ performance, the evaluation of the teacher-researcher’s lesson in terms of teaching approaches and suggestions for the teacher-researcher.

In order to receive valuable feedback from the classroom teacher, interviews were conducted twice each cycle, specifically after the last class of each cycle. As for the narrative interviews with student focus groups, these were conducted once each cycle after the visual data were collected.

3.5.2.2 Focus group

Given that the major participants in this research are students from M Public School, primary school students usually feel comfortable talking to their classmates and friends. In focus groups, participants are empowered and able to make comments in their own words, while being stimulated by thoughts and comments of others in the group (Robert, 2011, p. 285). As a result, students' ideas can be elicited by interviewing together with their classmates.

In this research, about twelve students were recruited as a focus group. Students shared their opinions according to the questions as they relate their direct view of the lessons, degree of acceptance to comprehension of the visual pedagogy.

3.5.3 Observation

In this research, the teacher-researcher also observed students' performance as a resource of data. Observation, as a means of collecting qualitative data, involves carefully watching and systematically recording what one sees and hears in a particular setting (Schmuck, 1997, as cited in Mertler, 2012). As with the interview, there are structured, unstructured and semi-structured observations. In semi-structured observations, observers not only use a schedule or checklist to organize observations, but also attempt to observe and record everything that happens in the class. Subsequently, the teacher-researcher reviewed the process and reflected on the difficulties encountered, such as students' questions, their engagement, cultural ignorance, comfort zones, note-taking, roles and objectivity. She shared the observation notes with her colleagues to have group discussions and elicited new ideas for better Mandarin teaching. To complement the interview, the teacher-researcher gained observations from interviews that took place outside the classroom, which can gain familiarity with the children's daily activities and find clues that can make Mandarin more learnable.

The teacher-researcher, as a full participant, recorded observations obtained from her own Mandarin class in a self-reflective journal. In addition, she also used a table to record students' performance, which will be discussed again.

3.5.3.1 Field notes

Field notes refers to recording directly what happened during the observation without inferring observation people's feelings or their responses. This includes the general setting description, portrait of the participants, record of acts, activities, and events; and the documentation of verbatim conversations. (Efron & Ravid, 2013)

In this research, the teacher-researcher used filed notes to record her teaching process and students' performance including their participation, what they said, and their facial expression as her crucial data to reflect on her visual pedagogy.

3.5.3.2 Self-reflection Journal

Sowa (2009) and McAteer (2013) pointed out several distinctive features of action research as a reflective and problem-oriented methodology. Action research stands as a critical investigation conducted by reflective practitioners who are self-evaluating in their practice and devoting themselves to problem-solving.

A self-reflection journal is crucial for teacher-researchers to achieve improvement in teaching. Teacher's journals can provide teacher-researchers with the chance to maintain narrative accounts of their professional reflection on practice (Mertler, 2012, p.12). Teacher-researchers can keep self-reflection journals to facilitate learning from experience and develop critical thinking towards the process of teaching. In addition, they can be used as vehicles of assessment in formal education for improvement in the next educational experience. Teacher-researchers' involvement and ownership of learning and teaching can also be stimulated by the self-reflection journal.

In this research, the researcher wrote self-reflection journals after each lesson based on her fields notes. The self-reflection journal consisted of four parts. The first part is the content of the lesson conducted and major steps and strategies related to the research in this lesson were recorded in detail. The second part of the self-reflection journal is to interpret these details and events, explaining what the researcher has learnt, and hypotheses and the reasons behind these strategies and activities. In the third part, evaluations from the teacher-researcher herself based on her thought and observations, and feedback from classroom teachers as well as students, would be recorded. The last part would include a renewed plan for the following lesson.

The teacher-researcher also made an observation sheet to record Class Five and Six students' performance in several areas in Warm-up session, New lesson teaching and Reviewing session. The observation sheet is presented below.

Table 3. Observation sheet

	Key points	Section1: Warm-up/Review Section	Section2: New content & practice (activities) Section	Section3: Review- reinforcement Section
1	Students are willing to ask a question			
2	Students focus on the teacher			
3	Students answer a question by the teacher			
4	Students are interested in visual materials			
5	Students are engaged in the visual related activities			
6,	Students can remember the word, phrase and sentence well, especially visual related content.			

The following is an example that the teacher-researcher completed in one lesson with the help of the classroom teacher from class Five and Six.

Table 4. Observation sheet (Example)

	Key points	Section1. Warm-up/Review	Section2. New content & practice (activities)	Section3. Review-reinforcement
1	Students are willing to ask a question	No	no	no
2	Students focus on the teacher	About 15 students	About 15students	About 15 students
3	Students answer a question by the teacher		About 25 students	About 15 students
4	Students are interested in visual materials		Limited	Limited
5	Students are engaged in the visual related activities		Limited	Limited
6,	Students can remember the word, phrase and sentence well, especially visual related content.			About 15 students

3.6 Data analysis

After the data have been collected through various approaches, mainly through interviews, the stage of data analysis follows, which is significant in the whole process of action research. In this research, visual data and self-reflection journal will be analyzed and interpreted.

Before analyzing data, it is necessary to record what is said in an interview, which is called coding. Coding, a process of labeling and categorizing data, is the first step in the analysis (Flick, 2014). According to Flick (2014), Coding is a method of making something easy to recognize or distinct. With the existing material, the work of coding is to generate concepts or themes, then allocate those excerpts of the materials into

different categories (Flick, 2014, p.373). This initial stage of data analysis is known as open coding because it is the process of “opening up” the text in order to uncover ideas and meanings it holds (Benaquisto, 2008, p. 3). Therefore, open coding was adopted in this research as the first step in data analysis. There are various coding methods, and in this research, the teacher-researcher used the three coding methods namely attribute coding, descriptive coding and emotion coding, in the first cycle as follows:

In the first cycle of the research, the teacher-researcher used the following coding methods in cycle 1 action research:

Table 5. First Cycle Coding

First Cycle Coding Methods			
Number	Coding method	Brief Introduction	Application in this research
1	Attribute coding	To give notations of essential participants information, such as settings, data format, etc.	To have an overview of the data and provide initial information.
2	Descriptive coding	To provide an organizational and logical grasp of the research	Use descriptive coding to identify how using visual materials can help students learn Mandarin
3	Emotion coding	To label the emotions of the participants	To provide deep insight into the participants' perspectives.

Based on the first cycle coding, the teacher-researcher moved on a further step with the data. According to the previous coding results from descriptive coding, the teacher-researcher can categorize the main points better and have a better understanding of her data. In addition, there is no doubt that the findings in the teacher-researcher's research needs relevant support from other literature, or some new and different findings from other research, which adds to the value of her own research.

Table 6. Second cycle coding

Second Cycle Coding Methods			
Number	Coding method	Brief Introduction	Application in this research
1	Focus coding	To develop further categories	To have a further understanding of data collected and a clear construction of chapters in the thesis.

3.6.1 Attribute coding

Data was organized by using attribute coding. Attribute coding is “the notation of basic descriptive information such as the field-work setting, participants’ characteristics, demographics, data format, time frame and other variables of interest for qualitative research.” It is usually used at the beginning of a data set rather than embedded within it. (Saldaña, 2015, p.55)

Attribute coding can be adopted in all qualitative research, particularly for those with multiple participants and research with a wide variety of data forms. In the teacher-researcher’s research, she focused on Year Five and Six, with students having various backgrounds and characteristics. There are 35 students in the classroom, many of which were white Australian children. The number of students who are from Asian-background families in Australia is 4, specifically from Korea, India and China. One student is of African heritage. Many students are from Arabic-speaking countries in the class. As a result, culture differences and family backgrounds need to be considered. In addition, according to the teacher-researcher’s observation, students in Year Five and Six have different characteristics. Some students, especially boys, are active learners who are more engaged in competitive activities and eager to show their success. Some students are shy and need more encouragement. Some other students prefer mature activities and demonstrate more mature behaviors. Moreover, using different data

formats was significant for the teacher-researcher in order to consolidate her research and to design the attribute coding, which was as follows:

Participants: 12 Year5/6 students and the classroom teacher

School: Maria Public School

Class: Year Five and Six

Age: 10-11

Mandarin background: Non-Mandarin background

Data formats: Interview, focus group

3.6.2 Descriptive coding

Descriptive coding ‘summarizes in a word or short phrase-most as a noun- the basic topic of a passage of qualitative data.’ (Saldaña, 2015, p.70)

Descriptive coding is appropriate for qualitative research as well, and it is especially suitable for beginning qualitative researchers learning how to collect data, code data and ethnographies (Saldaña, 2015). As a beginning teacher-researcher, organizing data is very important and descriptive coding is a clear and logical method for novices like the teacher-researcher to do qualitative research, which categorizes data at a basic level to provide her an organizational grasp of the research, so that is what she expected to achieve through descriptive coding. The following is one example of the teacher-researcher’s descriptive coding in the first cycle of the action research.

Table 7. An example of descriptive coding (See more specific in Chapter4)

Data	Descriptive Coding
<p>I: How do feel about the Mandarin class? You can share a general idea of the Mandarin class, or you can focus on one week's Mandarin lesson.</p> <p>Student1: Eh, <u>it was clear and easy to remember some words with pictures</u>, like baba or meimei.</p> <p>I: So how do you feel about it?</p> <p>Student 1: Yeah, <u>it was great fun</u> and I enjoyed in Mandarin class very much.</p> <p>I: Can you remember the Mandarin words well after the activities we've done in the Mandarin lessons? Especially visual related?</p> <p>Student7: Yes, but pictures are boring.</p> <p>Student 9: Yes, <u>some pictures are just not our style, and old fashioned</u>.</p> <p>Student 11: I like videos more.</p>	<p>Using pictures adds to the 'clarity' of learning, and reinforces students' 'memory' of the Mandarin words.</p> <p>Using pictures adds to the fun of the classes</p> <p>Negative: some pictures are not attractive for students – not students' style.</p>

3.6.3 Emotion coding

Emotion coding is especially for researchers who aim at exploring intrapersonal and interpersonal participants' experiences and actions (Saldaña, 2015). In this research, the teacher-researcher studied students' engagement through different visual materials and visual strategies and she needed to know students' attitude towards visual materials and visual strategies she used in Mandarin lessons. The following is one example of the teacher-researcher's emotion coding in the first cycle of the action research.

Table 8. An example of emotion coding

Data	Emotion coding
Some students put hands up to answer my questions, and when I let them think about 15 dollars, 25 dollars in Mandarin, <u>many students tried hard to think about it, then put hands up and looked at me zealously.</u> After that, students <u>helped me hand out money</u> I had printed. Most students enjoyed the game very much, <u>they were eager to get points and win.</u>	passionate & active Cautious Competitive

3.6.4 Focus coding and theoretical coding

In the second coding cycle, the teacher-researcher adopted focus coding. Focus coding helps the teacher-researcher develop categories and establish newly constructed codes based on the first cycle coding. The focus coding is as follows:

Table 9. An example of focus coding (See more specific in Chapter 4)

Data	Descriptive Coding	Focus Coding
The first part in this lesson is to check homework: guess 6 Mandarin pictographic characters: 山, 水, 人, 木, 日, 月 and draw pictures. <u>Not all the students did the homework.</u>	Not many students are interested in the task.	Negative: Some visual materials are not meant to be interesting and attractive to engage students. Students' has limited after class engagement.

With support of the theories she found in the literatures, the teacher-researcher used coding methods in her action research to categorize and analyze her data.

Coding is a preparative step for accessing the data and interpretation is the main activity in qualitative data analysis. To achieve an in-depth analysis, thematic analysis will be applied in this research after the data is divided into different categories (Boyatzis, 1998; Miles & Huberman, 1994, Shank, 2006, as cited in Saldaña ,2015). According to Clarke (2006, as cited in Flick, 2014), thematic analysis is:

‘a method for identifying, analyzing and reporting patterns (themes) within data. It minimally organizes, and describes your data set in detail. However, frequently it goes further than this, and interprets various aspects of the research topic.’ (Clarke, 2006, p.79, as cited in Flick, 2014)

Based on the research above, the researcher formed a table as an example of themes related to her research.

Table 10. Thematic analysis

Theme	Research Questions related	Data source
Students' engagement	RQ 3: What kind of visual materials can be used to engage public school students in Mandarin as foreign language teaching?	Based on classroom teachers' feedback and the researcher's own observation on students' performance in class
Learning efficiency	RQ 1: How can a visual method be developed to engage student learners in Western Sydney Region by making Mandarin learnable in speaking, writing and understanding?	According to the classroom teachers' feedback and students' assignments, point of views and the researcher's observation, self-reflection.
Teaching strategy	RQ 2: How can these materials be developed into useful strategies in classroom engagement?	Classroom teachers' feedback and suggestions and the researcher's self-reflection

3.7 Summary

This chapter explained the use of action research and the possible outcomes. Firstly, it values qualitative research, which is more suitable for this research. Then the teacher-researcher discussed the advantages of action research she has used in her study and in her research and design. It also described the participants, including the teacher-researcher. In addition, this chapter also provided the coding system and approach to data analysis in this study. The methodologies employed to produce the data will be introduced in Chapter 4 and 5.

Chapter 4 Visual materials

4.0 Introduction

In this chapter, the teacher-researcher highlights the combination of a range of visual materials used in Cycle 1 and Cycle 2. During the research, the teacher-researcher placed its emphasis on two topics: “My spare time” and “My interests”, with four subtopics: Travel, Shopping, Food and Painting related to students’ interest. The assumption was that they might be eager to learn some basic Mandarin words and sentences from their daily lives connected with these four small topics. Research participants were from Year Five and Six, and they were at the age of ten to eleven approximately. The teacher-researcher focuses on visual pedagogy and utilizes students’ visual literacy to facilitate students’ Mandarin learning. For example, the teacher-researcher showed students selected pictures, videos, real objects (such as money), self-designed booklets and PowerPoints to make strong connections between target Mandarin terms and these visual aids. These visual materials used in teaching are discussed in this chapter, with the support of data collected from the classroom teacher and students through interview and the teacher-researcher’s reflective journal and field notes about Mandarin teaching. Based on collected data, the teacher-researcher expanded her choice for visual materials in the second cycle and developed more diversified strategies (to be discussed in Chapter 5). During the two cycles, the teacher-researcher found that the visual materials could trigger students’ motivation better if they were closely related to students’ interests, age and personal backgrounds.

The following two tables are overviews of visual materials that the teacher-researcher adopted during the two cycles, which will be discussed specifically in this chapter.

Table 11. Visual materials developed in Cycle 1

	Lessons	Materials used	The rationale
1	Cycle 1, Every week	Booklets contain words and pictures	To introduce new knowledge and demonstrate explicit meanings of words
2	Every week	Printed pictures	To consolidate understanding of the target language terms.
3	Week 2, 4	Videos 1	To review greetings, numbers students had learnt in Term 1 & show them some famous places of China
4	Week 5	Facial expression and Mime (Three dimensional visual materials)	To attract students and consolidate their leaning of the words to express feelings
5	Week 6, 7	Real objects (money, shoes, clothes)	To help students get a better understanding of Mandarin money

Table 12. Visual materials expanded in Cycle2

1	Cycle 2, Week 1, 3,5,7,8,9,10	PowerPoints (food, colours)	Let students have another viewpoint on visual things.
2	Week 1,2,3 ,4, 7,8	Printed pictures; student Internet search	Student researchers creat bridges between words and visual things, and engage students.
3	Week 5	Mime (Three-dimensional visual materials	Engage students and practice their pronunciation
4	2,3, 7,9	Videos	To show students Mandarin food and painting.
5	Week 9	Real objects (dumplings)	Let students have a tactile understanding of words.

In order to answer the research questions about the first question: What kind of visual teaching materials can be used to engage students in CFL teaching, this chapter will put emphasis on discussing videos, pictures, objects and booklets in turn.

4.1 Pictures

Pictures used in this research are viewed as static visual materials which facilitate students' understanding of Mandarin words and learning of Mandarin characters. From the perspective of understanding Mandarin words, for example, the pictures can be food, or family members. When the teacher-researcher taught students the words for family members such as dad, mom and sister to the students, she demonstrated pronunciation-pinyin with pictures, and students could understand the meaning of the words immediately. For an example, the picture is as follows:



Figure 4.1 Father [baba]

Students quickly understood the word “baba” as they saw the picture. The following one is the teacher-researcher’s field note, which shows the process how students learnt the word “baba”.

I put the picture in the booklet with pronunciation-pinyin but no English translation. Students immediately understood the word “baba” after they saw the picture. Some of them called out father, some of them tried pinyin baba and said dad (T-R journal, April 26, 2017).

Using pictures adds to the ‘clarity’ of learning, and also enhances students’ ‘memory’ of the Mandarin words. The following example is a student’s idea about the relationship between pictures and his Mandarin learning. This student is a Mandarin language beginner who rarely exposed himself to Mandarin language environment before. He behaved very well in each Mandarin lesson and engaged in it. According to the teacher-

researcher's observation in her Mandarin lessons and other lessons as well, he was seen interest in videos and various pictures. And sometimes she saw him drawing.

It was clear and easy to remember some words with pictures, like baba and meimei (Student focus group Interview, June 28, 2017).

In addition, the classroom teacher also suggested as follows:

C.T: Probably you can show students pictures and let students memorize.
(Classroom teacher Interview, July 19, 2017).

This finding in the research was similar to the findings by Carpenter and Olson (2012), who stated that it is well established that pictures can be remembered better than simple words in memory research.

Learning through pictures appears to be a self-learning process to the teacher-researcher. Most students were attracted by the various pictures. In accordance with the teacher-researcher's reflective journal, when she showed students some pictures, usually most students would focus their attention on the pictures.

Most students can be highly engaged in differently interesting pictures. When they saw the pictures I showed them, sometimes they stared at the pictures and would say: "Wow!" "Cool!" Sometimes they would make a discussion with their classmates. I learnt that students would be highly motivated in learning some Mandarin words if the pictures are interesting and attractive enough. Actually, it was the same when I was playing videos (T-R journal, June 28, 2017).

On the negative side, showing pictures only could be useless in some cases, especially for the Year Five and Six students, who are more interested in something mature and interesting. Sometimes the teacher-researcher simply indicated a picture for students. To illustrate more effectively, the teacher-researcher showed students a picture of the colour green after teaching them the word "lv se".

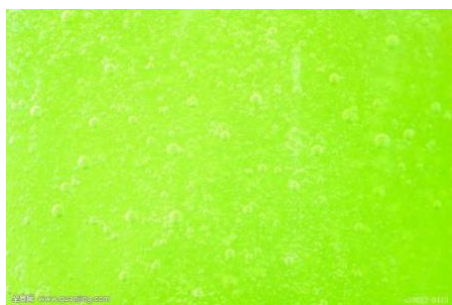


Figure 4. 2 Colour green [lv se]

The teacher-researcher also used the picture to review the word. Most students followed her to pronounce the word, but they had no high emotional engagement and no questions to ask. The following table is the observation sheet of students' engagement in the class Five and Six. The teacher-researcher completed the observation sheet with the help of the classroom teacher from class Five and Six, who observed students' performance carefully.

Table 13. Observation Sheet 1 (25 students in this class in total)

	Phases	Section1: Warm-up/Review Section	Section2: New content & practice (activities) Section	Section3: Review-reinforcement Section
1	Students are willing to ask a question	no	no	no
2	Students focus on the teacher	About 15 Students	About 15 students	About 15 Students
3	Students answer a question by the teacher		About 25 students	About 15 Students
4	Students are interested in visual materials		5	Limited
5	Students are engaged in the visual related activities		7	Limited
6	Students can remember the word, phrase and sentence well, especially visual related content.			About 15 students

As we can learn from the table above, some students were not really engaged. According to the feedback from students, it would make more sense to them to see a green object. Gangwer (2009) proposed several strategies for using pictures, suggesting that teachers show students a picture which is dominated by a simple colour, and students then associate a list of other things which are the same colour with it. However, the teacher-researcher's students were all Mandarin language beginners, and it would be hard for them to recollect many Mandarin words. Such an exercise would be more effective in teaching when students had accumulated more Mandarin vocabularies. But some changes were still made for the following lesson. The teacher-researcher used a strategy based on pictures to introduce words regarding colour in Mandarin as well, which is discussed in Chapter 5.

In one particular lesson, the teacher-researcher taught students the colour of blue, orange and pink in Mandarin. Instead of merely demonstrating colours as with the previous lesson, the teacher-researcher chose some pictures related to the colours in her teaching. For instance, the teacher-researcher used the following picture to present the colours and engage students.



Figure 4.3 Picture to demonstrate the colour blue [*lan se*]



Figure 4.4 Picture to demonstrate the colour pink [*fen hong se*]



Figure 4.5 Picture to demonstrate the colour orange [*cheng se*]

Apparently, students were more emotionally and cognitively engaged in those pictures compared to the previous lesson when they saw the simple colour pictures. The pictures above present colours in the real world, scenes and objects that students could recognize:

The students became more engaged in learning colours today. After I showed them the picture of blue sky and ocean, pink flowers and oranges, I asked them to guess the meaning of three words: *lan se*, *feng hong se* and *cheng se*. Some students were attracted by the beautiful ocean, sky and flowers, and some were attracted by the delicious orange. They said, “Blue ocean!” “I like oranges.” When I was going to consolidate these three-colour words, I pointed at the picture of oranges firstly, and almost simultaneously many of them called out the English word “orange”. Then I asked them to say the colour in Mandarin, and some quickly responded “*cheng se*!” even though some of them tried hard to recall the orange colour in Mandarin (T-R journal, September 6, 2017).

As a result, the teacher-researcher has learnt that using other relevant pictures to present the target terms might be productive. The teacher-researcher adopted various pictures during the research, which is one of the common visual materials used in the classroom. A finding has been found by the teacher-researcher that pictures helped facilitate students’ learning observation that many students are visual learners. However, not all of the pictures could boost their interests and make them engaged. The following feedbacks are told by students from an interview with the focus group.

Student1: It was great fun and I enjoyed Mandarin class very much. There were many pictures and videos to see.

Student 2: I felt bored when I see some pictures that were only of people’s shoes.

Student 3: Some pictures are just not modern, they are old-fashioned.

(Student focus group Interview, June 28, 2017)

On the one hand, pictures assist students' understanding of Mandarin words. On the other hand, showing students pictures that are not accord with their age and interest did not work very well. Having examined collected data, the teacher-researcher chose more interesting pictures for them. For example, one topic in Term 3 was food. The teacher-researcher picked some pictures of Mandarin food, which turned out to be attractive for students, because some students had ever tried that food chaofan: fried rice.



Figure 4.6 Picture to show fried rice [*chao fan*]

The teacher-researcher found out that this picture of chao fan was more attractive, which was noted in her field notes and reflective journal.

When I showed the picture of fried rice, many students were so attracted. Some students called out “Rice!” Some students said “Yummy!” One student told me that he had tried it once, and it tasted really good. I think that students have a higher level of engagement because most of them are interested in delicious food, especially some new food from other countries (T-R journal, August 2, 2017).

The following table is the observation sheet of this lesson.

Table 14. Observation Sheet 2

	key phases points	Section1. Warm-up/Review	Section2. New lesson & practice(activities)	Section3. Review reinforcement
1	Students are willing to ask a question	About 15 students		no
2	Students focus on the teacher	yes	More than 25 students	About 20 to25 students
3	Students answer a question by the teacher		More than 25 students	Some
4	Students are interested in visual materials		About 20 to25 students	About 20 to25 students
5	Students are engaged in the visual related tasks/activities		About 20 to25 students	About 20 to25 students
6,	Students can remember the words, phrases and sentences well, especially visual related content			About 20 to25 students

According to Anglin, Vaez and Cunningham (2004), static visual illustrations are able to improve knowledge acquisition when they are presented along with text materials. Yet the positive effects of the visual materials are not presented across all learning situations. As the author has discussed before, showing students featureless pictures, such as picture of family members and monotonous colour, could not realize students' active engagement.

Elsy and Novita (2013) investigated the effect of picture media on vocabulary achievement of third grade students in Bengkayang. According to these researchers, adopting different pictures in foreign language teaching and learning processes is remarkable. They found that students' achievement, especially in terms of vocabulary acquisition, was influenced significantly by picture aids that helped students to retain newly learnt words faster. The teacher-researcher also found in her teaching that students were engaged well in learning new words with various pictures though,

sometimes students forgot the words they had learnt quickly. For example, the teacher-researcher had showed students a picture of train in the booklet.



Figure 4.7 Picture of train [*huo che*]

Students failed to remember the word for train, *huo che* in Mandarin, very well. They could hardly recollect the word when the teacher-researcher reviewed it again at the end of the lesson. The teacher –researcher reflected this problem in her reflective journal:

Students were not engaged in learning the word: *huo che* and they could not remember the word very well. It seems that pictures do not always work well for the students' Mandarin learning (T-R journal, May 17, 2017).

The reason why the picture of a train did not have a lasting effect might be that trains are daily objects in students' daily lives. They went to school by train every day and trains are not interesting enough for them.

In another study, Carpenter and Olson (2012) also explored the effect of teaching new words in a foreign language through pictures. Research results indicated that pictures can be easily memorized. But they also stated that learning foreign language with pictures may not necessarily be effective based on their study. Besides the reason that some pictures are not attractive enough to engage students, Carpenter and Olson (2012) posited another reason based on the common-sense assumption that pictures can be easily memorized, learners can be overconfident and do not successfully engage in the

learning. In this research, the teacher-researcher held the idea that overconfidence was not the case for the Year Five and Six students.

To make full use of pictures in foreign language teaching and learning and engage students in learning, Elsy and Novita (2013) suggested that teachers could show students larger and clearer pictures, which draw students' attention and make them engaged in the pictures and the new language. So the teacher-researcher prepared larger pictures to attract students accordingly and found out that many students were engaged by larger pictures. But the teacher-researcher had printed pictures in small size by mistake before she showed them to the students, and in contrast she learnt that the small pictures attracted some students to pay more attention on them.

It is known that Mandarin characters belong to pictograph and are vivid in visual features. Therefore, the teacher-researcher has combined relevant images with target pictographic Mandarin characters in teaching. For example, the teacher-researcher taught students pictographic Mandarin characters including water, mountain, sun and moon after playing a video of famous places to visit in China. Before the lesson, the teacher-researcher designed a lesson plan. The following table demonstrates the main part of the lesson.

Table 15. UBD lesson plan

Stage One-Desired Results	
<p>Goal (s): 1. Students are able to recognize and respond to words, phrases and simple sentences in spoken Mandarin.</p> <p>2. Students demonstrate developing writing skills by recognizing and copying Mandarin. Students learn about ways of organizing and presenting information in context.</p>	
<p>Understanding(s): <i>Students will understand that</i></p> <ul style="list-style-type: none"> Some Mandarin characters are pictographic and words have their stems, which is different from English. The way of learning Mandarin, especially Mandarin characters, should be different from learning English, which is phonemic and meaningful language. Some Mandarin sentences' structures are the same as English. 	<p>Essential Question (s):</p> <ul style="list-style-type: none"> What do these Mandarin characters look like? (山 水 日 月 木 人) What do these Mandarin characters mean? How to pronounce and write these Mandarin characters.
<p>Students need to know:</p> <ul style="list-style-type: none"> Some specific stems or forms of Mandarin words A simple sentence to express feelings in Mandarin 	<p>Students are expected to</p> <ul style="list-style-type: none"> Pronounce these Mandarin characters Know the meaning of the Mandarin characters with the help of pictures Write Mandarin characters Express feelings about the trip
Stage Two---Assessment Evidence	
<p>Performance Task(s):</p> <ul style="list-style-type: none"> Draw pictures according to these Mandarin characters with their imagination Write down these Mandarin characters with the help of pictures Show students pictures and students write down the Mandarin characters Pronounce the words for feelings by looking at the pictures and my facial expressions 	<p>Other Evidence:</p> <ul style="list-style-type: none"> Response to these words in my spoken Mandarin Class engagement
Stage Three-Learning Plan	
<ul style="list-style-type: none"> Guess the meaning of the Mandarin characters and draw pictures. Ask students to explain their thoughts Introduce these pictographic Mandarin characters Watch a video and review these characters. 	

The teacher-researcher prepared several visual materials to introduce these Mandarin characters including pictures and videos, and also ask students to draw and write. Prior

to the Mandarin character lesson, some students told the teacher-researcher that they did not like Mandarin characters and writing learning because it was difficult and boring.

When the teacher-researcher began teaching the pictographic Mandarin character of water, 水 in Mandarin, she demonstrated the ancient Mandarin character of water, which is very similar to the shape of a river. The image is as follows:



Figure 4.8 Mandarin pictographic character of water-水 [shui]

Before starting the teaching, the teacher-researcher ask students to guess the meaning of this ancient Mandarin character, which is from ancient oracle bone scripture. She kept field notes about students' response.

I let students share their ideas first. Many students had their own thoughts and raised hands up zealously to share ideas. Some students thought “水” looks like a waterfall, while some said it was more like a dancing person. It seemed as if many students came up with ideas and was encouraged to put hands up quickly. There were also some students held that it was fire, river and part of them were sure it was waterfall. After they shared ideas, I told them that a river is full of water, and thus this Mandarin character means water (T-R journal, May 31, 2017).

On the one hand, students had many ideas regarding the meaning of the Mandarin character of 水, which means water in English. It helped them know and understand “水” more quickly and efficiently. However, according to the teacher-researcher's observation, many students were not highly engaged in learning Mandarin characters.

Many but not all students were engaged in it. They were more interested in Mandarin characters compared to their responses before the lesson. I think I

could invite some students to come up and draw down their pictures on whiteboard (T-R journal, May 31, 2017).

Based on this lesson, the teacher-researcher changed to a different kind of pictures and invited students to write on the whiteboard.

After teaching students words about Western food and Mandarin food, the teacher-researcher planned some Mandarin characters to teach including eat-吃[*chi*], and noodle-面[*mian*]. The following pictures are demonstrating these two Mandarin characters.



Figure 4.9 Picture demonstrating Mandarin character of eat-吃[*chi*]



Figure 4.10 Picture demonstrating Mandarin character of noodle-面

Many students responded to the first picture immediately and raised their hand to wave, telling the teacher-researcher it was noodles. Then she let them guess how to write the Mandarin character noodles according to the picture. Many students were engaged in

copying and drawing this picture but some were staring at the picture, suggesting that they were thinking about the Mandarin character.

Some students laughed when they saw the second picture. The teacher-researcher could see that the picture had attracted students successfully, or that some students just thought the boy was funny. The teacher-researcher asked students what they could learn from this picture. Some of them raised hands up and said a boy, an ice block. These answers were not what the teacher-researcher expected, so she further asked them what he was doing. Many students said that he was eating. Then she asked them what he used to eat. A few students answered me by saying her mouth. After that, the teacher-researcher suggested a try to find the Mandarin character about eating. A small number of students could actually find the Mandarin character of eat-吃, while the majority of them just had no idea of what the Mandarin character would be and were sitting still on their seats or colouring the picture. The following table illustrates the students' engagement focusing on their emotional engagement.

Table 16. Students' engagement focusing on emotional engagement

Data	Emotion coding
<p>Many students responded to it quickly, they raised their hands and told me it was noodles. Then I let them guess how to write the Mandarin character noodles according to the picture. <u>Many students were engaged in copying and drawing this picture actually, and some students were thinking about the Mandarin character.</u></p> <p>Some students <u>laughed when they saw this picture. Some of them put hands up and said a boy, an ice block.</u></p> <p>Only a few students could actually find the Mandarin character of eating. Many of them just had no idea what the Mandarin character would be. <u>They were just sitting there or colouring the picture without smile.</u></p>	<p>Curious</p> <p>Happy</p> <p>Uninterested</p>

Compared with the lesson about pictographic Mandarin characters including water-水 [shui], sun-日 [ri] and mountain-山 [shan], students were more engaged in learning Mandarin through these images with Mandarin characters implicitly hidden in the image. They were more interested in finding and imitating Mandarin characters through these pictures. Also, the teacher-researcher has concluded that students were seen a better result in memorizing the meaning of these characters than their pronunciation.

When reviewing these characters, I asked students to read them and tell me their meaning. I was aware that many students could recall some of the characters' meaning, but they could not remember the pronunciation.

(T-R journal, May 31, 2017).

4.2 Videos

Videos used in this research are sourced video clips from YouTube that were mostly posted by both professional Mandarin teachers and enthusiastic Mandarin learners. These videos include monologues about cultural introductions or Mandarin songs. The former includes examples such as videos of Mandarin festivals Mid-Autumn Day and Mandarin food. The latter one contains examples the Number song (Cycle 1) and the colour song (Cycle 2). During the preparation of a lesson, the teacher-researcher visited YouTube and selected videos through typing key words related to Mandarin learning. There are some criteria for videos selection for students, which are demonstrated as follows:

- The videos need to be modern enough to attract students
- The videos need to cater to students' interests
- The videos can involve strong Mandarin cultural significance

Videos have been playing as one of the most popular visual materials used in classroom for language teaching. According to Herron, Morris, Secules and Curtis (1995), video is praised for contextualizing language which can demonstrate the meaning of language explicitly and depict the foreign culture more effectively than other instructional material.

In the teacher-researcher's class, she showed students many videos. For example, one of the videos is the greeting song, which is showed as a screenshot as follows.



<https://www.youtube.com/watch?v=0fm11XFw8uY>

There were a few complicated long sentences for these beginners, like “What’s your name? [*ni jiao shen me ming zi*]” and some greeting sentences that the teacher-researcher had not taught them. However, according to the teacher-researcher’s observation, students have learnt some words and even sentences very well after watching the videos. The teacher-researcher has found that students succeeded in keeping what they had learnt in mind and used them to greet the teacher, such as “Hello” [*ni hao*], “my name is...” [*wo jiao...*]. In addition, the students could taught themselves through the video. In the Term 2 (Cycle 1), the teacher-researcher interviewed 12 students in the focus group. The following talk was a boy’s feedback about the use of the video.

Student 3: We learnt “zaijian, zaijian, zai~jian~”by the song. We like it.

The teacher-researcher: Yes, through the video and music

(Student focus group Interview, June 28, 2017).

In fact, the teacher-researcher noticed that many students enjoyed this greeting song, and quite a few followed the song as the teacher-researcher played the video.

I knew that lots of students like the greeting song. When I played this video, many students especially boys cheered and followed the song. I think it is because this song is a kind of hip-pop song and has strong beats (T-R journal, May 3, 2017).

Nevertheless, what surprised the teacher-researcher was that some girls had a dislike to this greeting song. They thought this song was too childish. So the teacher-researcher made a comparison between these two different opinions towards the same song, and recorded in her reflective journal:

Although the song is hip-pop, the visual is still animation. Some students particularly girls may think it is too childish for them. I think girls may possess more interest in more mature videos (T-R journal, May 3, 2017).

Besides some basic greetings and simple Mandarin language terms, the teacher-researcher also introduced Mandarin culture to show students more about China and Mandarin culture by playing videos about China, Mandarin food, famous places and

Mandarin painting etc. For instance the documentary China Travel below:



<https://www.youtube.com/watch?v=pg4PITkBahU>

Students were amazed to see those places. The following description is the teacher-researcher's reflective journal.

Some students were amazed and said “Wow” while watching magnificent scenery in the video at the beginning, which made me so glad. Yet students' interest faded away as time went on because the video was too long. I need to take this into consideration (T-R journal, May 31, 2017).

The classroom teacher (C.T.) from Year Five and Six gave the teacher-researcher some feedback about the videos as well.

C.T: I think that helps the engagement. Using songs, videos and pictures of different foods really engaged students. I think all of those are beneficial for students to catch what you are talking about, and kids like something to watch. But it is important that the videos should not be too long (Classroom teacher Interview, July 19, 2017).

The classroom teacher's feedback matched what the teacher-researcher observed. When the teacher-researcher played other short video about ice and snow festival in North China, students were much more engaged in it but not losing interest so apparently.



Harbin Ice and Snow Festival 哈爾濱國際冰雪節

<https://www.youtube.com/watch?v=Oz9LyTng2Pw>

Then I played a short video of ice and snow festival in North China. When the students saw the sights in North China, particularly ice engraving in light at night, with big eyes. They asked how could this be, and some asked if they could go there (T-R journal, May 31, 2017).

Students in Sydney may have never seen such heavy snow or beautiful scenery of the ice engraving at night. This video led them to be interested in it, and aroused their desire to know more about it. A higher behaviour and emotional and cognitive engagement can be realized through curated videos.

One of advantages for videos is that they can largely engage students, especially those who are at the age between 9 and 11. Students enjoy watching interesting videos and learn knowledge through those videos. However, there is also an apparent disadvantage, namely losing interest and attention while watching long video. Garcia (2012) argued that the videos should be attractive and motivating between thirty seconds and four minutes duration.

As for the types of video, different types of video can trigger students' different interest levels. From the beginning, the teacher-researcher mainly played particular videos, but did not show videos that are suitable for higher grade students for the younger students in Year Five and Six. According to the interview with the classroom teacher, the classroom teacher suggested that sometimes a more mature video is needed. The following content is what the classroom teacher said:

C.T: I think these materials are good, probably for students of this age. Some songs, videos, pictures are more accessible to higher grade students, but kids do like them. So probably a mixture of something mature, older and what you are using now (Classroom teacher Interview, July 19, 2017).

The students' feedback as mentioned before, girls' feedback in particular, indicated that the greeting song is not mature enough for their age. As a result of the feedback both from the classroom teacher and students and the teacher-researcher's own reflection,

the teacher-researcher found two kinds of videos for students to watch in the Cycle 2. The first one is a colour song with children's animations and the other one is a short ABC news report about a nine-year-old abstract painter, which was released in October 2016. In other words, it's easy to know that the ABC news is more mature than the colour song.



<https://www.youtube.com/watch?v=3C108WIIg-E>



Chinese colors 颜色歌 (yán sè gē) 中国歌 для детей

<https://www.youtube.com/watch?v=M1ptQeHrYy8&t=2s>

Here is the journal of the teacher-researcher:

I thought students in Year Five and Six would like songs especially with hip-hop rhythm, but the news is more mature than the colour song. I chose the colour song to facilitate students' memory of the colour words, and the ABC news helps students to review the colour words and appreciate these abstract paintings created by the young girl. I just wanted to see which kind of videos could engage students more and helped students learn knowledge better. Then I need to modify my lesson planning and seek some videos which are helpful and attractive (T-R journal, September 13, 2017).

Based on the interview and the teacher-researcher's observation, students have been confirmed more interest in the ABC news. They, especially the girls, thought this video was more mature and interesting. The teacher-researcher let them answer three

questions after watching the video. Many of them raised their hand quickly and were eager to answer my questions, and most of the time their answers were correct. Therefore, she could tell that most students were highly engaged in the video. Another question was about distinguishing colours in a painting in the video. Many students participated in it. They could remember many colour words in Mandarin like green, blue, red, which indicated that previous learning experiences including guessing, matching, drawing and the colour song are effective.

When the teacher-researcher was going to review numbers that students had learnt in Term 1, she played the number rap song again to help students review numbers from one to ten. Most students liked it and followed the song together. Students' feedback is below:

Student 11: I like number rap song.

Student 8: The number song is interesting

(Student focus group Interview, June 28, 2017)

Consequently, the teacher-researcher concluded that the song is effective for enhancing the learning of numbers. Students remembered the numbers from one to ten through the video.

Based on the collected data in Cycle 1, the teacher-researcher gave priority to short videos between thirty seconds to four minutes in Cycle 2. During introduction to Mandarin painting, she showed students a two-minute video about Mandarin painting, which demonstrated how a blossom tree was painted in Mandarin brush. The following pictures illustrate the process of painting the blossom tree.



Figure 4.11 Screen shot 1 to demonstrate the process of Mandarin painting of blossoms



Figure 4.12 Screen shot 2 to demonstrate the process of Mandarin painting of blossoms



Figure 4.13 Screen shot 3 to demonstrate the process of Mandarin painting of blossoms



Figure 4.14 Screen shot 4 to demonstrate the process of Mandarin painting of blossoms

The teacher-researcher recorded students' engagement in her field note:

This video is not too long for students. Unlike watching the video of famous places to visit in China, this time many students did not gradually lose their interest, and they were interested in Mandarin painting. However, it did not trigger their emotional and cognitive engagement as much as other more modern videos like the number rap song video (T-R journal, August 30, 2017).

The teacher-researcher, thus, learnt that video length of between thirty seconds to four minutes, which is based on the literature from Garcia (2012), is effective for students to learn and engage.

Nevertheless, the videos proved to be double-edged. The teacher-researcher played a part of a video about famous Beijing street food when she taught the topic of food. The teaching record has been written into her field note:

When I played a part of the video introducing famous Beijing street food, some students were seen facial expressions which indicated that the street food is disgusting. Some students even said: "Oh my God, yucky!" I assumed that students might be keen on Mandarin street food which is totally different from the Western fast food, so I felt embarrassed and convinced myself with culture gap. But I also noticed that most students kept watching the video regardless of their attitude toward Beijing street food. The novelty might be the main reason (T-R journal, August 2, 2017).

Owing to the cultural differences, some students could not accept the appearance of some Beijing street food. However, strange things from another culture can attract their interest as long as Mandarin street foods were not so different from theirs.

To sum up, the teacher-researcher concluded that videos should be interesting and student-centered, and cater to styles that students love based on the literature and data collected in this research. Videos combined with students' preferred music with strong beats can successfully engage students. The length of the video played a significant role as well because it could make direct impact on students' engagement and patience. In addition, cultural difference was a crucial issue to be considered.

The teacher-researcher also made a comparison between videos and pictures which have been discussed earlier (see Session 4.1). The teacher-researcher found that videos were received a little more engagement than pictures, and there were a large number of

students who said that they liked some particular videos including the Mandarin food song. The teacher-researcher was thinking that students were just interested in the song or that they were engaged in watching videos.

T-R: If I just play a song or the animated pictures like the Mandarin food song video rather than the video, no girl no boy, do you think it is still of fun? So, you guys think it is better with videos?

Students: Yeah

Student 1: It would be little bit funnier.

Student 6: We think it is funny for the first time. Then it is not interesting.

Student 7: Yeah, because we've already knew what's gonna be next.

(Student focus group Interview, September 20, 2017).

Therefore we can come to the conclusion that teaching materials that integrated videos, pictures and sounds will be more attractive to students. Moreover, playing the same video too many times will undoubtedly undermine its attraction to students, no matter how funny it is.

4.3 Real life objects

In this research, objects here refer to real ubiquitous things in everyone's daily life, like books and pens. As far as the teacher-researcher's concerned, adopting real objects adds to students' intuitive feelings towards the relevant Mandarin words they are learning.

Real objects are applicable to students' vocabulary acquirement in Mandarin teaching. Teachers are able to build extra motivation for students through a real object because the vocabulary is being applied to something in the real world rather than a vocabulary list in a book, a picture in the textbook, or flashcards.

The teacher-researcher used some common real objects in her lessons. When deciding whether it was worth using real objects to facilitate students' learning, the teacher-researcher took two aspects into consideration:

1) The enjoyment of the real objects. Although real objects can add to intuitive feelings towards the target language point, sometimes there is unnecessary to use real objects. For example, if the teacher-researcher was going to teach the word book [*shu ben*], she may not use a real book to show students since it might not be more interesting and attractive for students.

2) The feasibility of adopting real objects in the class. For example, when students were learning words for family member such as dad [*baba*], mom [*mama*] etc., it would be more interesting and impressive to invite some of their family members join the class. But this is not possible during school time. The same goes for animals, because the teacher-researcher could not bring animals in while students were learning the words for animals in Mandarin.

Different objects in class can trigger different level of students' interest and motivation. For the first example, the teacher-researcher taught students some words for basic daily objects such as clothes-yifu, schoolbag-shubao, shoes-xiezi etc. Firstly, the teacher-researcher used pictures to lead in these new words, and then she pointed to students' schoolbags, her own clothes and shoes to help students review these words and consolidate them. It was not so motivational or effective. The teacher-researcher's field notes and reflective journal are showed below:

When I reviewed these words, students actually were not so motivated by these real objects like the shoes I pointed to. They were obedient and followed me to review these words, but I could tell there was neither much motivation on their faces and in their tone nor emotional engagement. I am thinking that it may be because these real objects were too normal and not different from their everyday experience (T-R journal, May 24, 2017).

In another lesson, the teacher-researcher brought real Mandarin money RMB into class when she taught shopping and money. For instance, she let students pronounce *yi yuan* or *yi kuai*, and then she showed students both the yi-yuan coin and note and advice them to feel the texture of Mandarin money. Before the class, the teacher-researcher finished the UBD template (see Chapter 3). This UBD approach allowed the teacher-researcher to think about revised lesson plans and assessments. In the table below, the first stage is shown as desired results. The second and third stages (revised lesson plans and assessment) are discussed in Chapter 5.

Table 17. UBD Lesson Plan

• Stage 1-Desired Results	
<ul style="list-style-type: none"> Goal (s): 1. Students recognize and respond to Mandarin money and simple sentences in spoken Mandarin. How much is it? <ul style="list-style-type: none"> 2. Students use words they know in Mandarin to interact in everyday activities. 	
<ul style="list-style-type: none"> Understanding(s): <i>Students will understand that</i> There are some similarities and differences between Mandarin money RMB and Australian dollars. The way of learning Mandarin should be connected to English to help students learn Mandarin. 	<ul style="list-style-type: none"> Essential Question (s): Look at RMB, what are the similarities and difference with Australian dollars? “Dollar” in Mandarin is “yuan”, who can guess how to say 1 dollar, 5 dollars, 10 dollars in Mandarin? Now we know RMB, how would you ask the price when you are shopping?
<ul style="list-style-type: none"> Students will know: More about Mandarin money RMB and recognize them 	<ul style="list-style-type: none"> Students will be able to: Pronounce and remember last week’s Mandarin words. Be familiar with RMB. Use the sentence “duo shao qian?” in Mandarin to ask prices.
• Stage 2- Assessment Evidence	
<ul style="list-style-type: none"> Performance Task(s): Review: Game: Draw and guess game, listen to my instruction. Draw what English letters look like in Mandarin pronunciation pinyin. Game: Two-groups competition. “Smart seller” 	<ul style="list-style-type: none"> Other Evidence: Response to these words in my spoken Mandarin. Class engagement. Classroom teachers’ observation and feedback.
• Stage 3-Learning Plan	
<ul style="list-style-type: none"> Warm up- review: Draw and guess game, listen to my instruction. Show students Mandarin money and let them try to recognize the money and recall numbers first. Teach and practice. Activity: Math (with pictures of RMB). Game: “Get the money” 	

In this lesson, students were engaged in the teacher-researcher’s teaching. They have experienced both behavioural engagement and emotional engagement. They tried very hard to pronounce these words and paid special attention to the real Mandarin money.

The teacher designed some relevant activities including Math exercise and Get the money for them, which will be discussed in session 4.4 and 5.2. She kept field notes and a reflective journal to demonstrate how students behaved in that lesson.

Students were very interested in Mandarin money, and most students held on to the money tightly when the notes or coins were in their hands. They observed the Mandarin money carefully and discussed with their classmates. I could see joyful and curious expression on their faces. Many students asked me if the money I showed them is real and they even asked me more than one time if they could keep it (T-R journal, June 5, 2017).

It can be seen from the field notes of the teacher-researcher that students' greater interest was triggered by the interesting object, Mandarin money, which was something they have never seen. There has found no related research about integrating real objects into teaching and learning Mandarin as a foreign language or other languages' teaching and learning. But the teacher-researcher spotted that using real objects could make target language terms more vivid and meaningful and provide students intuitive feelings towards the target language terms. The real objects for students should be vivid and eye-catching. Students are interested in things that are of great fun and that they have not seen before. Students' opinions towards Mandarin money has been recorded as follows:

Student 7: I would like to see Mandarin money because I have not seen it before.

Student 3: It is not interesting for me because I have seen Mandarin money and I have it.

(Student focus group Interview, September 20, 2017)

By starting with a real object, there is a really practical application for new vocabulary. The teacher-researcher felt that her using real objects was able to build extra motivation for the students because the vocabulary was being applied to something concrete in the real world instead of a clip art flashcard describing abstract meaning, a vocabulary list

in a book, or a cartoon character in the textbook. When she brought her passport which students had never seen before, they were really interested in what Mandarin passport looked like and they asked: When did you take this photo? Where have been? Hongkong, Taiwan the same? Where is Wenzhou? Students not only were interested in the Mandarin passport but also wanted to know something relevant.

4.4 Booklets

On the basis of her previous teaching experience in Term 1, the teacher-researcher reflected on her teaching and the students' learning.

In term 1, students learnt some simple words and sentences and they were interested in it. But I found that without a notebook or booklets they would forget what they had learnt easily and the whole learning process would not be so logical. I think it is better to prepare booklets for students.

(T-R Journal, April 7, 2017).

In order to make the process of Mandarin learning more logical, the teacher-researcher designed two small booklets on the topic of My Spare Time, with two subtopics Travel and Shopping before her first cycle in the action research. Basically, each booklet contained one sub-topic, and the teacher-researcher inserted various pictures into these two small booklets. The purpose of inserting pictures is to facilitate students' understanding and remembering of target Mandarin terms. The pictures that the teacher-researcher chose had close ties with the teaching content and was also attractive.

There were mainly pictures and pronunciations of Mandarin words-pinyin but no English translations in the booklets. The teacher-researcher's aim was to help students understand and remember the meaning of those words with the help of pictures. Student's feedback about the booklets is presented below:

Student 1: The booklets are good.

The teacher-researcher: Making it logical and helping you engage in learning?

Student 1: Yeah. It is good to have booklets with pictures.

Student 3: We collaborate to work out what the word is.

(Student focus group Interview, June 28, 2017).

The following picture is the cover of the teacher-researcher's booklets.



Figure 4.15 The cover of booklets

During handing out the first booklet, the teacher-researcher observed the students' responses. Most of them were interested in the new booklet and the teacher-researcher wrote down in her field note:

When two students and I were handing out the booklet, most students were interested in it and they leafed through the booklet. Some of them discussed the pictures in it with each other and some looked at the booklet. They mainly tried to figure out what they were going to learn and see what pictures were in the booklet (T-R journal, Apr 26, 2017).

For this booklet about the sub-topic 1: Travel, the teacher-researcher designed the following four questions to lead into the topic.

- Who are you going to travel with?
- Where would you like to travel?
- How will you go there?
- What do you need to take for your trip?

Students could write down their answers under these four questions, and the whole teaching content in this booklet is about these questions. For example, the first part is about people. The teacher-researcher taught students the words for family members and friends in Mandarin. The following picture is a part of the content about people.



Figure 4.16 A part of booklet 1 about people in Mandarin

The teacher-researcher did not provide parallel text of English in the booklet because the teacher-researcher expected students could understand the meanings of these words through pictures. First of all, the teacher-researcher asked students how to say mother in Mandarin instead of teaching them that mother in Mandarin is [*mama*]. Most students engaged in finding possible words that the teacher-researcher told them in Mandarin. Some students responded at once and showed the teacher-researcher how to pronounce the word.

The second, third and fourth parts were about Where: places to travel, How: transport, and What: what was needed to take for traveling. The teacher-researcher mainly used pictures, Mandarin characters and pronunciations as demonstrated above. The teacher-researcher also planned to teach students two sentences about travelling, using the words they had learnt. The following picture is an example that the teacher-researcher showed the students.



Figure 4.17 An example of talking about traveling

And finally, the teacher-researcher wanted student to think about their trip and stick some photos or draw pictures to show their trip on a page. Furthermore, she taught them words for happy, angry, surprised and upset in Mandarin. When reviewing these four words, the teacher-researcher also showed students facial expression and let students say words in Mandarin to consolidate their previous learning.

In the second booklet, the teacher-researcher reviewed the words for clothes, shoes, and bags which were related to the second sub-topic: shopping. She also taught students about Mandarin money as well. The teacher-researcher put pictures of Mandarin money in the booklet as well, the following played an specimen of Mandarin money.



Figure 4.18 A twenty-dollar Mandarin note

This time the teacher-researcher did not give Mandarin pronunciation under the pictures of Mandarin money, as she wanted students to recall the numbers they had learnt before. Then she designed a maths competition with those money pictures. The teacher-

researcher expected students to get more familiar with Mandarin money through pictures and simple math exercises. Part of the exercise is presented below.



Figure 4.19 An example of the math exercise

Students finished it very quickly, and the teacher-researcher wrote down their performance and reflections upon herself.

Many students liked the maths exercise especially the boys who did it quickly and showed me their results. From the maths aspect, it is not difficult for them to do it. Most of them finished it in a few minutes. As a result, I asked my students to read out the results rather than simply show me the written results. I figured I could tell students about the currency and ask them write down the equivalent Australian dollars, which may build a connection between Mandarin money and Australian money (T-R journal, June 14, 2017).

Then the teacher-researcher planned to teach students a simple sentence to bargain. She used a picture about people bargaining in English, which is demonstrated as follows:



Figure 4.20 Picture about people bargaining in English

The teacher-researcher suspected that students were too young to get interested in bargaining issues. They did not have emotional and cognitive engagement on this topic. Or the objects in this picture were not interesting, and perhaps they might be more engaged in bargaining for iPhones and other objects related to their lives.

Using these two little booklets helped the teacher-researcher to teach and students to learn logically at the same time. However, according to the teacher-researcher's observations, students did not often have high emotional and cognitive engagement during this term.

Student 2: I like finding words but some pictures in it are not attractive.

(Student focus group Interview, June 28, 2017).

This student's feedback suggests that the pictures the teacher-researcher used were not attractive enough to promote engagement. The teacher-researcher reflected that her teaching experience is not very sophisticated in combination of booklets and relevant effective visual strategies. Students can easily get bored with only booklets. The teacher-researcher adapted her booklets, and tried to use PowerPoint more and developed more visual strategies in Term 3 (Cycle 2). The booklets are attached as an appendix.

4.5 Three dimensional visual materials

Besides basic visual materials adopted by the teacher-researcher above, the teacher-researcher also attempt to use three dimensional visual materials including facial expression and mime to facilitate students' learning.

In Cycle 1, the teacher-researcher showed students her facial expression and make students to think of the correct word in Mandarin while reviewing the words for feelings, including happy and, upset. The teacher-researcher has learnt that students were more engaged when seeing her facial expression than the pictures in the booklet, which has already been mentioned previously.

Some students laughed when they saw my angry facial expression. I saw many students were quickly looking at the booklet and seeking for the word. Some students who already knew it raised their hands and told me the word in Mandarin. The pictures in the booklet are just four faces with four basic facial expressions. It might be more interesting for them to see me and their peers doing theatrical facial expression. Some students were doing facial expressions with me quite happily (T-R Journal, May 23, 2017).

The teacher-researcher also tried mouthing words to engage students and let them practice pronunciation after learning the words for Sandwich, Wonton, Italian noodles, hamburgers and dumplings. At the beginning, the teacher-researcher mimed a word and encouraged students to guess what she was saying. Students were highly engaged and stared at the teacher-researcher's mouth. Once they got the answer, they raised their hands quickly and yelled out "Oh!", "I know!". This time, the teacher-researcher invited students to mime. Some boys even left their seat so that they could get closer and have a clear view, while the teacher-researcher was at the side of help the mummer. Most students were engaged in this activity.

In terms of Mandarin characters, besides using pictures discussed previously, the teacher-researcher also tried "Body spelling" in a lower grade class because of the limited time available in the Year Five and Six class. The teacher-researcher showed students a character and told students to work in team and use their bodies to form the character. Students were engaged in this and done very well with their partners, but it was a little difficult for them. It was a successful exercise for Year Five and Six students.

In a word, visual materials are not just limited to pictures, objects, PowerPoint slides and videos; three dimensional visual materials succeeded in improving students' engagement as well.

4.6 Summary

This chapter answered the first and the second contributory question: What kind of visual materials can be used to engage students in Mandarin as a Foreign Language (CFL) teaching? What are the effects of visual materials in understanding Mandarin words and sentences for Australian public school students?

From the research mentioned before, it can be seen that the engagement of students was more evident at first with videos than with still pictures. Some of the decisive features relevant to engagement were: choosing modern videos and not playing them repeatedly or frequently for keeping freshness.

At first, students were more interested in videos than pictures. Of all different kinds of visual materials the teacher-researcher used, she realized that videos were the most popular than pictures and objects. As for booklets, students were most interested in the pictures within them. But the pictures were not so attractive and the students at this age seemed to have no interest in texts. Therefore, they lost interest and did not engage with them very much.

Students' preference was considered in the first cycle, where the teacher-researcher used various visual materials including videos, pictures, booklets and objects. The teacher-researcher put her primary energy at finding out visual materials the students preferred, and how to achieve higher student engagement with these visual materials. Both questions will be researched further and discussed in Chapter 5. In Cycle 1, the teacher-researcher made the following key findings about visual materials.

Cycle 1:

- Videos and pictures chosen should be student-centered, and related to their daily life. Also, students' interest and gender have to be considered.

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- Students were more interested in what they had not seen before, which can catch their visual attention and trigger their emotional engagement and cognitive engagement.
 - Booklets make the process of teaching and learning logical, but it should be combined with other visual materials and visual strategies as well.
 - In terms of pictographic Mandarin characters, they were suggested be presented by relevant scriptures, pictures and videos. In addition, it may be easier for students to learn and remember the meaning of characters than to learn and remember the pronunciation of characters due to visual stimulation, as Shen (2008, as cited in Shen 2010) stated.

The action research nature of the project meant that the teacher-researcher reflected on the lessons she delivered. In the second cycle of action research, Term3, based on the data collected in Cycle1, Term 2, the teacher-researcher modified her lesson planning. She used PowerPoint more often than booklets. Also, she used different types of videos and pictures after listening students' feedback. The teacher-researcher developed different visual strategies with data collected from both the students in Year Five and Six and the classroom teacher.

Cycle 2:

- Students at this age prefer more mature visual materials, or with hip-pop style . When it came to videos, they preferred short news with interesting topics.
- Teachers could show other relevant visual materials to connect and present the target language terms.
- Videos should not be too long.

In conclusion, visual materials need to be creative and new for students. As Marzuki (2015) suggested, teachers should be creative in selecting visual materials. Students were more interested in funnier and fashion visual materials. For example, students

were more engaged in seeing hip-pop style greeting pictures, or Mandarin fried rice than a train. Additionally, pictures that imply target language terms in them are more effective than simple ones. Diversity always plays a very important role in choosing visual materials. Teachers should prevent themselves from using the same material too many times, since doing that will inevitably undermine the freshness of visual material and further impact students' engagement.

Moreover, visual materials contribute to easy learning and fun in Mandarin learning. Students were more keen on learning through different visual materials. Visual materials facilitate their understanding and memorization of target Mandarin terms. Also, students' thinking dispositions towards the Mandarin language can be changed by visual materials, and it is clear that the Mandarin language itself is complicated. Before the teacher-researcher began her Mandarin lessons, she thought that students might lose interest in Mandarin language learning.

T-R: Did you have any ideas towards Mandarin language and Mandarin lessons before our Mandarin lessons began?

Student 1: I thought it might be too difficult to learn Mandarin

Student 2: Not really, I knew nothing about Mandarin language and China.
(Student focus group Interview, June 28, 2017).

Other three dimensional visual materials included the teacher-researcher mouthing the Mandarin word (for example, for dumplings) without making any sound. Here facial expression was also helpful for students' Mandarin learning.

The teacher-researcher, in fact, found difficulties in selecting the exact visual materials that the students preferred, pictures in particular. The teacher-researcher also held the idea about using animated pictures, but she did not deepen her research about it due to limited time and resources.

In conclusion, engaging the students with visual materials reflecting on the ways in which they learnt was therefore the focus of Chapter 4.

Chapter 5 Visual strategies and Analysis

5.0 Introduction

The teacher-researcher has discussed various visual materials in her Mandarin teaching including videos, pictures, booklets and objects in Chapter 4. Based on feedback collected from the twelve students in the Year Five and Six class and the classroom teacher and notes taken by the teacher-researcher herself, both advantages and disadvantages of those visual materials have been found, and some new strategies have been developed to gain a higher level of engagement from students. In this chapter, the teacher-researcher will discuss visual strategies adopted in her Mandarin teaching such as visualization, drawing and guessing and answering questions after videos.

To facilitate students' learning and engagement, the teacher-researcher has developed several strategies including using visual materials to reinforce students' word memorization, playing videos in different ways, using questions to engage them and letting students visualize and make guesses to trigger their interest. Behind these visual strategies, the teacher-researcher has also designed some visual related activities to support visual teaching strategies for young learners. These strategies were designed to motivate learners.

The main visual related activities are described in the following table:

Table 18. Visual -related Activities

	Visual related activities	The rationale	Evidence
Week 2	Match the pictures with the words	To enhance students' understanding of words	Students are engaged in learning words with colorful pictures.
Week 3	You Draw I Guess	To review words students have learnt. E.g. Cola: 可乐 Bread: 面包 Schoolbag: 书包	Most students are mainly visual learners and they are interested in drawing. Students focused on what their partners were drawing and tried hard to
Week 5	The love hug: Each student with one picture of money on cloth, presenting a price. When the teacher says a price in Mandarin, students need to find partners to form the total price.	Let students experience, know more about the pictographic Mandarin characters. Using the visual feature of Mandarin characters to help students learn Mandarin characters.	Students were excited and engaged in the game. They firstly listened carefully to what the teacher-researcher said and tried hard to recognize Mandarin Characters of numbers.
Week 6	Maths competition (the numbers showed with money pictures: How much?)	To engage students and help them remember more about Mandarin money.	Students got to know about Mandarin money and were very interested in doing the Maths competition.
Week 7	The love hug: Each student with one picture of money on cloth, representing a price. When the teacher says a price in Mandarin, they need to response to it, find partners to form the price.	To facilitate students' learning, engaging students.	Students were excited and engaged in the game. They responded more quickly.
Week 8	Draw step by step according to the teacher's instructions.	To engage students and help students review the words they've learnt.	Students were engaged in what the teacher-researcher drawing. They were curious.
Week 9	Ball Game: Each student sticks a picture on his/her cloth. One student starts throwing the ball across another student, and he/she needs to say the word of the picture on that student's cloth.	To review words students have learnt and engage students.	It was a popular game among students with their teachers. The teacher-researcher changed a little bit. Students were interested in it.

In Cycle 2, the teacher-researcher planned more challenging visual materials and developed visual strategies.

Table 19. Visual Related Activities (Cycle 2)

	Visual related activities	The rationale	Evidence
Week 1 and every week	Show pictures and pronunciations, students guess and match.	Let students have a better understanding of words, and remember them well. Let students visualize and engage them.	Students are engaged in learning words with colorful pictures. Students are visual learners and they can learn better.
Week 3	Match the pictures with the words	To engage students and review words they have learnt	Students could remember the words better through pictures.
Week 4	Show students words with pinyin, ask students to search for pictures on the Internet	To enhance students' learning, and to engage them. To see whether they have remembered or not.	Students were more interested in searching and learning by themselves.
Week 6	Making dumplings, 4 students take some pictures as reporters. They use their classroom teacher's phone to catch the movements of making dumplings, cooking dumplings and eating dumplings.	Students learn to make real dumplings and taste them after learning the word for dumplings in Mandarin. Let students know more about Mandarin dumplings, helping students learn 饺子-dumplings better.	Students are also kinesthetic learners. Students were so engaged in making dumplings and they remembered the word 饺子-dumpling
Week 7	A video was played in several parts and was played with another one together. Students take notes while watching a video.	To engage students, and encourage deeper learning.	Students were less distracted. They got bored and distracted when they watched a long video.
Week 9	Fill in the colour in a picture according to the colour instructions in Mandarin.	Engage students and let students remember the words for colour better.	Students were interested in drawing and they liked using different color.

5.1 Reinforcing word memorization, using visual materials

Newly learnt words need to be reviewed more than once so as to consolidate students' word memorization. And thus the teacher-researcher has developed the following visual related activities to reinforce students' knowledge.

5.1.1 “You Draw I Guess”

In order to reinforce students’ learning, the teacher-researcher prepared “You Draw I Guess” game to review words in Cycle 1. The teacher-researcher first drew some pictures based on what students had learnt, and then students would guess and say the word in Mandarin. The teacher-researcher also picked two groups of students in pairs to make a competition.

Students mainly learnt Mandarin through these visual aids, and as consolidation, the teacher-researcher used these visual materials as well as designed visual related activities for students to remember the words better. For example, students enjoyed the game “You Draw I Guess” very much. To demonstrate, first, the teacher drew a picture of the word for father; baba, and let students guess who she had drawn. I picked two students, one for the drawing and the other for guessing. After that, I invited four students to form two groups and compete with each other. They were interested in drawing and guessing, which led many students to participate in the game. The main visual related activities are demonstrated as follows:

In the second cycle of action research, Term3 and based on the data collected in Cycle1, Term 2, the teacher-researcher modified her lesson planning. This term was about hobbies including two subtopics: eating and drawing. The teacher-researcher used PowerPoint instead of booklets and other visual aids, and she also modified her visual strategies with the visual materials used and data collected from both students in Year Five and Six and the classroom teacher.

Students were interested in guessing and they were eager to win during the competitions. However, they were so excited about winning that they did not remember all the words and sometimes they just answered in English. (T-R journal, May 1, 2017).

The teacher-researcher focused on engaging more students and reinforcing their words memorization. Students who were guessing attracted visual attention from students who were drawing. Students were just waiting in the beginning, yet when the game was started, they only concentrated their mind on the game. They were focused and ready to evoke their word memorization. Once they were engaged in it, they had visual vigilance, persisting at guessing words through pictures drawn by their partners. Sometimes the transition from pictures to words failed, but for the students, who saw words written on paper and drew them, they recalled the meaning and visualized them. During the activity, the teacher-researcher acknowledged that students were enjoyed transiting words to pictures, and many students asked the teacher-researcher if they could exchange their role at drawing. Students who guessed were engaged as well.

5.1.2 Guessing and Matching Pictures with Words

Besides simply showing students words with pictures to review, the teacher-researcher ask students to match words with pictures.

The teacher-researcher did not only use this in reviewing words but also in introducing new words. Remembering new words seemed to be more effective for students than the teacher-researcher's direct teaching. Students has seen preference for visualizing words at the first step and finding the meanings of words by themselves. The following record is a student's suggestion.

When you teach some new words and review knowledge for us, you can just show us the words, and let us think about it and visualize in our mind. For example, when we are going to learn or review the word of bread [*mian bao*], you can show us the Mandarin characters and pronunciation first.

(Student focus group Interview, June 28, 2017).

Also, the classroom teacher gave the teacher-researcher a relevant suggestion.

C.T: I'm thinking cutting the pictures with names, and they can keep the pictures. Matching pictures (Classroom teacher Interview, July 19, 2017).

In Cycle 2, when the teacher-researcher introduced new words, she showed students words with characters and pronunciations firstly and then ask students to guess. For instance, the teacher-researcher prepared a picture presenting the colour blue, which was demonstrated in Chapter 4. At the beginning, she only showed students characters and pronunciation of blue-蓝色 [lan se] and let students guess what colour it is. Next she showed students the picture which is implied the answer in it. Students were engaged in thinking what colour it might be.

Most students were eager to figure out the answer and put their hands up more than one time, trying to find the correct answer. When they had the right answer, they cheered “Yes!” and felt satisfied. (T-R Journal, September 6, 2017)

To increase emotional engagement, the teacher-researcher also tried the matching exercise to consolidate students’ word memorization. For example, after she taught some basic Western and Mandarin foods in Mandarin, including fried noodles [*chao mian*], sandwich [*san mingzhi*], wonton [*huntun*] and hamburger [*han baobao*], she designed a matching exercise on PowerPoint. The following one is the screenshot of that slide from PowerPoint.



Figure 5.1 Screenshot of a slide from PowerPoint

5.1.3 Colouring-in activity

According to the teacher-researcher's observation, students were highly engaged in drawing. As a result, the teacher-researcher prepared some pictures in black and white including Monkey King, Eiffel Tower, A boy who was saying "I love you Dad", and a Thomas Train for students to choose and colour in Cycle 2. Students were asked to paint the correct colours according to the numbers, which had already been given Mandarin pinyin, in each picture. The following pictures are examples.



Figure 5.2 An example the teacher-researcher prepared

In this lesson, every student was engaged in colouring pictures. Many students chose the picture of Eiffel Tower, and just few students chose Tomas Train and the little boy. They used their pastels to colour in carefully according to Mandarin pinyin below. Some students still could not remember some colour words in Mandarin and asked the teacher-researcher for help. The following pastels are examples of students' work.



Figure 5.3 Example 1 of a student's work



Figure 5.4 Example 2 of a student's work



Figure 5.5 Example 3 of a student's work

Some students were found very creative and enjoyed drawing. They did not only follow instructions and colour in, but also used their imagination and creativity to finish the picture.

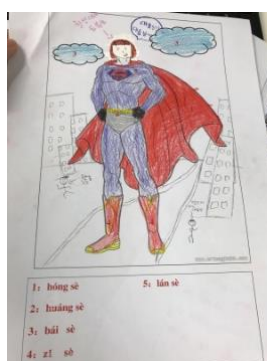


Figure 5.6 Example 4 of a student's work

Having examined the students' work, the teacher-researcher learnt that students could remember most colour words in Mandarin, but some students made wrong colouring. For example, in Figure 5.5 above, this student coloured the number three area blue where it was supposed to be white [*bai se*].

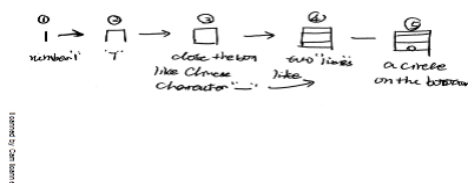
I noticed some students coloured in a wrong colour when they showed me their work. Some students remembered some colours incorrectly when I asked them and I had to rectified for them. Some students were just engaged in colouring regardless of colour instructions. A few students asked me that if they were permitted to use colours whatever they liked on the picture. I could see students were more engaged than on some other tasks I asked them to do. Sometimes I think I need to be strict and just show them some visual materials according to my lesson design. Or I can ask them to label the colours they choose

(T-R Reflective Journal, 11, September 2017).

5.1.4 Painting and Guessing

According to the teacher-researcher's observation, most students were interested in drawing and guessing, and enjoyed finding answers by themselves. Thus, the teacher-researcher designed an activity for students to recall words they had learnt previous week, namely painting and guessing. The teacher-researcher mainly used Mandarin words students had learnt to give them instructions step by step, and students needed to follow the teacher-researcher's instructions and draw the images accordingly and try to guess what they were drawing. Whoever got the answer was put their hands up during the drawing. This is a strategy to engage students in thinking and finding answers, and consolidate their previous knowledge.

This week the first part was reviewing what they've learnt last week. I let them listen to my instructions, draw pictures step by step and guess what they were drawing. They were allowed to raise hands up as long as they had ideas. Many students liked drawing very much, and they felt happy and interested in this activity. Some of them even cheered "Yeah!" The first word was mobile phone [*shouji*]. I gave them instructions including numbers in Mandarin and other instructions in English. For example, I prepared steps for students to follow as they thought about drawing a mobile phone-shouji.



(T-R journal, June 12, 2017).

Students were engaged in this process, trying hard to figure out the answers. However, many students could not follow her instructions and became confused because most of the time the teacher-researcher tried to use instructions in Mandarin that students had learnt before.

Actually, it was a little confusing for students to follow my Mandarin instructions. It may be the reason that they had forgotten some they had learnt before, or it was still difficult for them to follow my expressions in Mandarin without the help of visual material or English translations. (T-R journal, May 11, 2017).

Many students were engaged in this activity, thinking about what they were drawing. They wanted to find an answer by themselves. But it remained a little difficult for students to follow the teacher-researcher's instructions especially at the Mandarin instructions part. It might result from the truth that their listening comprehension skills still needed improvement and it was their first time doing this kind of listening activity. But that could be explained from the perspective that students' attention was being distracted by their engagement in guessing and finding the answer. The following note is the teacher-researcher's reflection about this activity.

Based on my observation, although students got confused when they were listening to my Mandarin instructions, they were still interested in following my instructions and drawing images step by step. I think that students at this age are growing more psychologically mature so they may be fond of finding out answers by themselves rather than accepting answer from teachers.

(T-R journal, May 11, 2017)

The following table illustrates students' engagement in the activity.

Table 20. Students' engagement in the activity of Painting and Drawing

Data	Descriptive coding	Focus coding
<p>Many students liked drawing very much, and <u>they felt happy and interested in this activity. Some of them even cheered "Yeah!"</u> The first word was mobile phone [<i>shouji</i>]. I gave them instructions included numbers in Mandarin and other instructions in English.</p> <p>I gave them instructions about the word bread- [<i>mianbao</i>], pen- [<i>bi</i>], bag- [<i>shubao</i>] as follows: a circle- then liu (number 6) in it- a smaller 6; yi (number 1); ba (number 8)- san (number 3) on the right- and 3 on the left. <u>Some students put hands up when I had not finished my instructions, and surprisingly, they were right.</u> However as for some words like mobile phone and bread, <u>they still need to consult their booklet.</u></p> <p><u>Some students got confused and distracted.</u></p>	<p>Students were interested in drawing.</p> <p>Students were engaged in guessing and thinking about what they were drawing.</p> <p>Many students were engaged in it but Mandarin instructions sometimes distracted them.</p>	<p>Positive:</p> <p>Students could be largely engaged in it</p> <p>Sometimes students felt confused and distracted by some Mandarin instructions.</p>

Considering the responses from students toward this activity, the teacher-researcher also thought about designing something mysterious such as a security code using numbers, English letters and other things they already knew visually. With these, the teacher-researcher could ask students to find clues and figure out the final answers. For example, it can be a process of finding out what it is both in English and Mandarin. But given the limited time and the demanding rule of this activity and other difficult issues considered, the teacher-researcher chose not to do this activity.

5.2 Triggering students' interest

Triggering students' interest is one of the most significant issues to be considered for it can exert great influence on students' engagement in class and their learning efficiency. Relevant activities have been adopted by the teacher-researcher to achieve the strategy of triggering students' interest.

5.2.1 "Get the money" and "Find your partner" game

The teacher-researcher's idea of the "Get the money" game was based on students' interest towards Mandarin money. Prior to this activity, the teacher-researcher showed students real Mandarin money, which has been discussed in Chapter 4. Most students were curious about what Mandarin money looked like. Therefore, the teacher-researcher thought it might engage students by asking them to catch money and say the denomination of the Mandarin note or coin as the teacher-researcher threw it over her shoulder. Students were truly engaged in this activity.

When I threw notes or coins, most students were waiting behind me to get a note or a coin. They asked me to throw towards him or her as well. Students who got it tried hard to tell me the denomination of the note or coin. Although it was still difficult for some of them, I found that they had emotional engagement. They smiled, and tried to recall what they had learnt with a serious mind. (T-R Journal, May 31, 2017)

From the teacher-researcher's point of view, it seems as if they are competing for making money. Students had visual attention on the foreign money, which they felt excited to catch, and happy to tell me the denominations of the notes and coins in Mandarin. Students' opinions about this activity are showed below.

Student 12: It was interesting for me and I would like to catch and touch Mandarin money that I have not seen before.

Student 8: Not interesting for me because I have Mandarin money.
(Student focus group Interview, June 28, 2017)

Again, this has proved the conclusion that students are more engaged in something they have not seen or tried before as mentioned in Chapter 4. To review these words about numbers and money, the teacher-researcher also designed another activity.

Firstly, there was a quick review of Mandarin money, including numbers. Students can recall some without looking in their booklets. Some students raised their hands to answer my questions, and when I asked them 15 dollars, 25 dollars in Mandarin, many students tried their best to think about it, and then raised hands and looked at me zealously. I've found they enjoyed thinking and guessing according to their previous knowledge and always were able to find something new by themselves. After that, students helped me hand out the money I had printed. Each student had one copy of money stuck on clothes. Students needed to recognize the pictures of money and find partners to form the price when I said a price in Mandarin. Most students enjoyed the game very much, and were eager to get points and win. When they finished, they called me again and again to check and were very excited about getting points. They cheered, called out "Yes!" and clapped hands. While owing to the limited space and large number of students, some did not really enjoy the game and failed to respond to some of the numbers I said. (T-R Journal, May 31, 2017)

The following coding table is demonstrated to show students' engagement.

Table 21. Coding table to show students' engagement

Data	Emotion coding
<p><u>Many students tried their best to think about it, then raised hands and looked at me zealously.</u></p> <p>Each student had one copy of money sticking on clothes.</p> <p><u>Most students enjoyed the game very much, they were eager to get points and win.</u></p> <p>When they finished, <u>they called me again and again to check, and were very excited about getting points. They cheered, called out "Yes!" and clapped hands.</u></p>	<p>passionate & active</p> <p>Cautious</p> <p>Competitive</p> <p>Happy, excited</p> <p>Very excited about getting points</p>

It can be seen that students performed both behavioral engagement and emotional engagement. Most students have not seen Mandarin money, and as a result they paid attention to the Mandarin money and the relevant activities.

5.2.2 Colour recognition

In Cycle 2, Term 3, the teacher-researcher designed a subtopic for students: Painting. The teacher-researcher learnt that most students enjoyed drawing very much, as mentioned previously. When the teacher-researcher introduced words of colour in Mandarin such as red and yellow, she drew colourful pictures and the pronunciation of target colour were among them. Students needed to recognize the colour and its pronunciation. The following painting demonstrates an example of these pictures.



Figure 5.7 Example of colour picture drew by the teacher-researcher

Students were attracted by these colourful paintings and thus were engaged in the process of finding colours well. Even though pronunciations were obvious to find and were responded quickly without too much hesitation. Students were more engaged compared to merely showing students pictures as discussed in Chapter 4. Their eyes were more focused on these pictures and many of them put hands up quickly.

5.2.3 Imagining and drawing activity

The teacher-researcher taught students words in everyone's daily lives in the second booklet, including pens [*bi*] and bread [*mianbao*]. After the introduction to these words, she asked students to draw whatever they liked with imagination as long as they had relationship with the letters in Mandarin pronunciation, such as “b” and “i” for pens in Mandarin [*bi*]. Here is the main part of the lesson plan.

Table 22. The teacher-researcher's relevant lesson plan

Stage 1-Desired Results	
Goal (s): 1. Students recognize and respond to Mandarin money and simple sentences in spoken Mandarin. How much is it 2. Students use words they know in Mandarin to interact in everyday activities.	
Understanding(s): <i>Students will understand that</i> <ul style="list-style-type: none"> There are some similarities and differences between Mandarin money RMB and Australian dollars. Mandarin language can be connected with English and Pictures 	Essential Question (s): <ul style="list-style-type: none"> Do you still remember these pictures I showed you? In Mandarin? Look at the pictures, who can tell me how to say bread/ pens/ Cola in Mandarin? Use your imagination, what does these letters look like? Draw down.
Students will know: <ul style="list-style-type: none"> More about some daily words: bread, pens and Cola. A simple sentence to express what does he/ she want, especially for shopping: I want... 	Students will be able to <ul style="list-style-type: none"> Pronounce and remember these Mandarin words Know the meaning of the Mandarin words.
Stage 2----Assessment Evidence	
Performance Task(s): <ul style="list-style-type: none"> Review: Game: You draw I guess. Draw what English letters look like in Mandarin pronunciation pinyin. 	Other Evidence: <ul style="list-style-type: none"> Response to these words in my spoken Mandarin Class engagement. Classroom teachers' observation and feedback.
Stage 3-Learning Plan	
<ul style="list-style-type: none"> Warm up- review: Draw and guess game, listen to my instruction Show students Mandarin money and let them try to recognize the money and recall numbers first. Activity: Draw what does English letters looks like in Mandarin pronunciation pinyin. 	

The following blank is an example for the word pen [bi].



Figure 5.8 An example of the word pen for students to draw with letter B and I

Many students were engaged in this and they drew some pictures and English words. One student finished the task soon and the teacher-researcher asked him if he thought it is helpful for him remembering these three words. He told the teacher-researcher that he was not so sure but it had lots of fun. Through observing students' performance, the teacher-researcher recognized that students cherished a special enthusiasm for impromptu drawing, but it might not be so effective in consolidating their learning and needed to be reappraised. Some students really liked this activity and wanted to do it on the whiteboard two or three times. They were creative and could image many interesting pictures and English words. There is one of their creations.

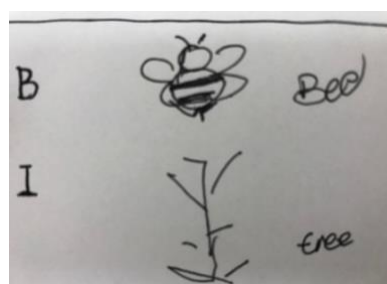


Figure 5.9 An example of student' work

In the next lesson, the teacher-researcher reviewed these words and she found out that it was not so effective for not all students could remember these words. But the teacher-researcher thought it could be beneficial in making connections among Mandarin, English and visual materials including pictures and videos.

5.3 Improving students' understanding of content

To attract Year Five and Six students and engage them in Mandarin learning, the teacher-researcher searched various videos for students, as discussed in Chapter 4. On the one hand, effective videos can catch students' attention; on the other hand, simply showing students a video does not always engage students during the whole lesson. And that's why the teacher-researcher developed some strategies to engage students and improve their understanding of content, based on the teacher-researcher's observation and the classroom teacher's suggestions.

5.3.1 Dividing videos into several parts

The teacher-researcher singled out various videos on YouTube for students in Cycle 1, which has been discussed in Chapter 4. To reemphasize it, only playing the students a video can distract them and a long video more than 4 minutes will not have their attention concentrated. Consequently, the teacher-researcher tried to divide a video into several parts if possible.

The teacher-researcher has talked about her Mandarin teaching topics in the two research cycles. In Cycle 2, the teacher-researcher also gave a lesson to introduce one of the most important Mandarin festivals, Mid-Autumn Day. First of all, the teacher-researcher picked three relevant videos about Middle-Autumn Day on YouTube. At the beginning of the lesson, she introduced the word for Middle-Autumn Day [*zhong qiu jie*], and then she played a video of the legend of Middle-Autumn Day, which lasted about six minutes. The following one is the screenshot of the video.

She stopped the video at 2.30 and asked students a few questions:

- What's the boy's name?
- What did he do?
- What did Heavenly Queen Mother give him?

Most students still locked their eyes on the video with hands up when the teacher-researcher paused the playing and asked those questions. It was not difficult for them to answer. Then the teacher-researcher continued the video to the end and asked students three more questions:

- What happened to Hou yi's wife?
- What do people usually do on that day?
- What do they eat?

Many students raised their hands and showed the teacher-researcher a steadfast facial expression, indicating that they had the right answers already. The teacher-researcher picked several students to answer each question to see whether they were really engaged in the video. All their answers were right. As for the second question, students had different answers according to video including family reunion, dinner party and full-moon enjoyment. The teacher-researcher showed a part of another video, video B, about family reunion and full-moon enjoyment and reviewed the word moon [*yue liang*]. When it came to the last question, the teacher-researcher showed students a paper with mooncake-月饼 [*yue bing*] on it and asked students to read it. After the word mooncake [*yue bing*] had been introduced, the teacher-researcher played a part of video B about mooncake to show more details about mooncake for the students.

The teacher-researcher also told students about Chang'e, a gorgeous lady who is regarded as Hou yi's wife in the legend, and Jade Hare [*yu tu*], rabbits living in the moon. At the end of the introduction, the teacher-researcher showed students a video of shadow dancing in the Middle-Autumn Day. She paused the video when it showed images of these words on the screen and reviewed it again.

The teacher-researcher argued that playing videos and teaching words in this way can engage students better. They received visual stimulation through these divided videos. Long video could distract them as mentioned in Chapter 4. However, the combination

of words with pronunciation and parts of videos seemed to good for improving students' memory. The teacher-researcher reviewed those words and asked students to retell the story of Mid-Autumn Day next week. Many students could catch the key points of the story and revealed their own understanding of this Mandarin festival. They knew how this traditional festival came into being, and the ways people celebrate it.

Student10: I have better connection between words related to Mid-Autumn Day like mooncake [*yue bing*] and the videos you showed us.
(Student focus group Interview, September 20, 2017).

Limited by time, the teacher-researcher did not conduct a deeper research on this strategy. She regards it as an effective video which can draw students' attention and facilitate students' understanding of content.

5.3.2 Taking notes while watching videos, and answering questions.

In Cycle 1, the teacher-researcher sometimes showed students a video and then might review a few relevant words or phrases they had learnt. In the course of playing the video, some students were distracted and thus the classroom teacher proposed these suggestions:

We watch "Behind the News", it is news but for this age group. Let them take notes and answer some questions. The videos are not long, and you can ask some questions in the video. Kids love that.
(Classroom teacher Interview, July 19, 2017)

So the teacher-researcher prepared some questions for students based on a video she found. For example, she downloaded a video of a 9-year-old abstract painter, which has been mentioned in Chapter 4. The teacher-researcher learnt that giving students a task, such as taking notes and preparing to answer a few questions, could engage the students better.

Before playing the video, I told students that they needed to answer questions after the video and take notes. While students watched the video, I observed them and found them watching it carefully. When they had the answers, many of them said “Oh, I know!” quietly and put hands up although I had not invited them to answer questions. And a few of them took notes. It was not difficult for students to remember a part of details in the video and answer my questions. When the video ended, I picked students to answer questions. The majority of them knew the answers with hands up and the students I picked all got the right answers (T-R journal, 30 August 2017).

Based on the teacher-researcher’s observation and students’ performance at answering questions, the teacher-researcher acknowledged that to ask students to take notes and answer questions could engage students and test their previous knowledge. In this video, the teacher-researcher paused at an abstract painting and invited students to point out colours in Mandarin. Many raised their hands, and students whom the teacher-researcher picked could say one kind of colour in that painting in Mandarin. They remembered colours the teacher-researcher had taught them.

In this cycle, the teacher-researcher adopted the same data collection methods and coding methods as in the Cycle 2 action research.

5.4 Scaffolding students procedural understanding, using visual materials and hand on activities

Before teaching words for Mandarin food, the teacher-researcher showed students pictures of Mandarin food, including fried rice, fried noodles and dumplings. And she found that all of students knew what dumpling was surprisingly. When she asked students whether they knew how dumplings are made and cooked, many students did not know and some of them even had not tried dumplings.

As a result, the teacher-researcher designed a lesson for Year Five and Six students to learn more about dumplings. Before the dumpling lesson, the teacher-researcher talked about it to her mentor teacher. The mentor teacher thought it was a good idea but a few

things needed to be considered, including safety and religion. She suggested that it was better to buy chicken mince rather than pork or beef in case there were Arabic-speaking children. For this reason, the teacher-researcher bought the ingredients needed for dumpling making, and her mentor teacher brought an electric pan to cook the dumplings. Also, the teacher-researcher found a video about dumpling making on YouTube. At that lesson, the teacher-researcher played the video first and then showed the students how to do it again and asked the students to follow. Students were really interested in making dumplings.

I showed students a relevant video in order to make them have a better understanding of how dumplings are made. Most students were watching the video quietly. Some students made sound “Wow” in a low voice after watching how dumplings were made and cooked with delicious sauce. After that, I showed students how to make a dumpling again, and I told them to follow me and make dumplings by themselves. Students made dumplings carefully, and most of them made more than one dumpling. I helped them cook these dumplings with the classroom teacher. Many students sat around the pan and curiously watch how the dumplings are cooked. Most students rushed to the first tray of dumplings were cooked to take a morsal. Most students said “Yummy!” “Good!” after they had tried the dumplings. I think this time the students have had a deeper understanding of dumplings (T-R journal, August 23, 2017).

Honestly, it was clear to see that students were pretty engaged. Most of them were learning the procedure of making dumplings through the video and by watching the teacher-researcher in earnest. And all of them were eager to make a dumpling and many of them even making three or four dumplings. The students were emotionally and cognitively engaged. They observed the dumplings in the pan and enjoyed eating them. The students’ feedback from the interview follows.

T-R: What did you like in this lesson?

Student 3: Making the dumplings

Student 2: It was really cool.

T-R: Is that helpful for you to learn and remember the word for dumplings in Mandarin?

Students: Yeah

Student 5&7&10: *Jiaozi*

Students: Can we have more Mandarin food making lessons?
(Student focus group Interview, September 20, 2017).

Through the video and observing the teacher-researcher's demonstration of making dumplings, and then the hands-on activity, students consolidated their learning of the word dumpling [*jiao zi*], and knew more about dumplings: how are they made, how are they cooked and how they taste. The following record is the classroom teacher's feedback.

C.T: The cooking lesson was really good, and they all learnt something from the video and instructions. I thought the cooking lesson was very good. Continue to teach your lessons with you introducing any new words or ideas and then with an activity that is hands-on to keep students engaged.
(Classroom Interview, September 20, 2017).

Here are pictures showing students making and cooking dumplings. Considering ethical issues, no students' faces appeared in the photos and their photos of eating dumplings were not taken.



Figure 5.10 Making dumplings



Figure 5.11 Cooking dumplings

The following is the analysis of students' performance in the dumpling making lesson.

Table 23. Students' performance in the dumpling making lesson

Data	Emotional Coding
<p>After knowing some Mandarin food including dumplings, today's topic was making dumplings. To begin with, I showed students a video of dumpling making. <u>Most students were watching the video quietly, and some students made little sound "Wow" in a low voice after watching how dumplings were made and cooked with delicious source. After that, I showed students how to make a dumpling again, and then I asked students to make dumplings by themselves. Students made dumplings carefully, and most of them made more than one dumpling. I helped them cook these dumplings with the classroom teacher after they finished. Many students sat around the pan to watch how the dumplings are cooked. Most students rushed to the first tray of dumplings were cooked to take a morsal. Most students said "Yummy!" "Good!" after they had tried the dumplings.</u></p>	<p>Focusing on the video</p> <p>Most students were watching quietly and some made the little sound "Wow"</p> <p>Engaged in making dumplings</p> <p>Interested</p> <p>Love to try dumplings</p> <p>Enjoyable</p>

This dumpling making lesson is based on the zone of proximal development (abbreviated as ZPD), which contains different levels of what a learner can do without help and what he or she can do with scaffolding (See Chapter 2).

Scaffolding was developed by sociocultural theorists applying Vygotsky's ZPD to educational contexts. Scaffolding plays a process through which a teacher or more competent peer gives aid to the student in her/his ZPD if necessary, and tapers off this aid as it becomes unnecessary.

5.5 Using basic technologies including animations on PowerPoint and searching on the Internet

In Cycle 1, the teacher-researcher mainly used booklets, pictures, videos and objects and sometimes PowerPoint. As mentioned in Chapter 4 (4.4), the teacher-researcher thought using booklets did not always work well because of her lack of experience and the characteristics of students at this age. Therefore, the teacher-researcher tried PowerPoint more often and used its animations to attract and engaged students in cycle 2.

After teaching students eight colours including red [*hong se*], yellow [*huang se*], blue [*lan se*], green [*lv se*], orange [*cheng se*], pink [*fenhong se*], white [*bai se*] and black [*hei se*], the teacher-researcher organized students to have a quick review and then she used PowerPoint, which is demonstrated as follows.

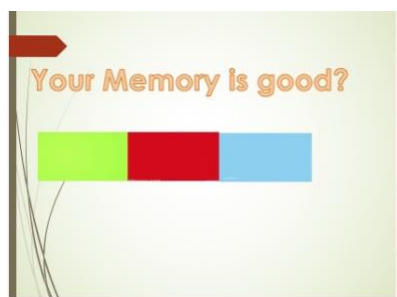


Figure 5.12 An example of a colour memorization activity (3 colours)

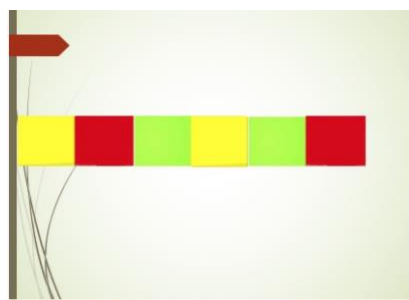


Figure 5.13 An example of a colour memorization activity (6 colours)

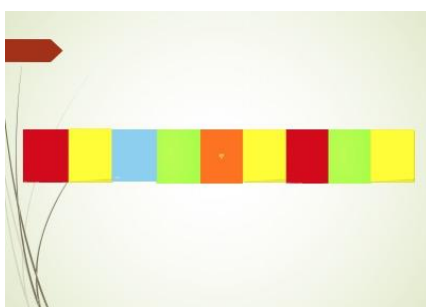


Figure 5.14 An example of colour memorization activity (9 colours)

Students were asked to remember the colours in order in a few minutes, and then the teacher-researcher would disappear those colours pictures in order. Students were expected to remember them and say it in Mandarin. Considering that students needed to remember colours in order and those words in Mandarin, the teacher-researcher started with the easiest activity with three colours. It was not difficult for students to remember colours in order, but some students could not remember some colours in Mandarin. As a result, the teacher-researcher was standing by ready to help, as where some students who did not know the colors.

When it came to five colours, the teacher-researcher asked two students to have a competition with a helper each. It was a challenge for students; not many students put hands up or asked the teacher-researcher to pick them, and those students were mainly boys. The teacher-researcher found that working with a partner was better, as students were engaged in working together.

Student 12: I remembered those colour pictures in order first and then I tried to think in Mandarin.

Student 7: It was a challenge for us especially when there were more than five colours. But I think it is interesting and it helps me remember colours in Mandarin better (Student focus group Interview, September 20, 2017).

Students firstly remembered colour pictures and then tried to transfer those pictures into words. When the teacher-researcher removed those pictures, they recollected pictures and words. It was a challenge for students' memorization and facilitating their learning of those colour words.

In addition, the teacher-researcher also tried letting students search pictures on the Internet according to a student's suggestion:

Student 10: You can try computers, and let us search on the Internet.

Student 6: You can have Mandarin lessons in the computer room.

(Student focus group Interview, June 28, 2017).

In one food lesson, the teacher-researcher invited students to come to search pictures online after showing them words with pronunciations.

Students were not so active in it as I expected. They did not stare at me eagerly. But when students saw the pictures including fried rice, dumplings, they said "Wow, delicious!" "Mumm, yummy!" They were attracted by the

food. I think just inviting some students to search on the Internet could not engage all students (T-R journal, August 16, 2017).

As students in Year Five and Six had computers specialized for primary school students, the teacher-researcher thought about making use of their computers, letting students work in groups and search relevant pictures, videos and information. However, a student told her someone still had not got one and the wireless connection did not work. As a result, she did not conduct this plan. Also, another class was using the computer room at the same time, so the Year Five and Six students could not use the computer room for Mandarin lessons.

5.6 After class visual related task

Referring to Sawyer, Munns and Cole (2013), students' engagement can be assessed in two aspects. One is "e", which refers to students' engagement in class. The other is "E", referring to students' engagement after class. Students' engagement is not limited to their participation and performance in class, it can also be measured in their after-class performance including finishing tasks, reviewing what was learnt in class and watching videos about China and Mandarin language at home.

In the interview in Cycle 2, one student told the teacher-researcher as follows:

I often tell my parents and grandparents what I had learnt in Mandarin lessons and teach them when I come back home. Sometimes I sing Mandarin songs for them (Student focus group Interview, September 20, 2017).

This student showed her "E"ngagement". She was engaged in Mandarin lessons as well. The teacher-researcher also asked other students in the focus group about this. Other students did not review Mandarin words, sentences or watch relevant videos back home, but many of these students were well engaged in Mandarin lessons, while some of them were sometimes engaged and sometimes were not. As a result, the big "E" was still a problem to solve.

Before the interview, the teacher-researcher gave students several tasks to perform after class. One is using greeting terms of Good morning [*zao shang hao*], Good afternoon [*xia wu hao*], Good evening [*wan shang hao*] and Good night [*wan an*] to greet parents at home. When the teacher-researcher asked them if they had greeted their parents in Mandarin, some students answered yes and some of them said just one time. Another after class task is visualizing and drawing the six Mandarin pictographic characters' pictures including mountain-山, water-水, sun-日, moon-月, wood-木 and people-人 before the lesson introducing these Mandarin pictographic characters which has been discussed in Chapter 4. In the next lesson, the teacher-researcher found that just a

few of the students tried to copy these Mandarin pictographic characters. The performance of after-class task was not ideal. The teacher-researcher asked the classroom teacher about it. The classroom teacher said that students usually did not have much homework to do and they liked playing more, and it would be better to remind students. As a result, the teacher-researcher led them to learn these Mandarin characters and let students share their ideas.

The last one is letting students stick photos or draw pictures in the booklet:

2. Enjoy your trip

Please stick your photos or draw pictures of the view

Figure 5.15 A page for students to stick photos or draw pictures in the booklet

This time the teacher-researcher asked the classroom teacher to remind students when she was not here. When the teacher-researcher checked in the next week, she found that some students had in fact drawn something on that page.

In summary, the teacher-researcher mainly focused on students' engagement in class and their after-class engagement still needed to be paid attention and improved.

5.7 Summary

This chapter answered the third contributory question: How could these visual materials be developed into useful strategies for classroom engagement?

In the chapter 5, the teacher-researcher focused on engaging visual strategies and challenged students in ways that she did not imagine in the first cycle. Students liked independent learning but they also liked working with other students. Additionally, students struggled to follow Mandarin instructions but still enjoyed the guessing activity. Based on the teacher-researcher's observation and reflection, students liked drawing and guessing activities. Also, using visual materials in another way could draw students' attention. For example, playing videos in several parts and combined with other videos could better engage students.

Based on the visual materials the teacher-researcher adopted in Mandarin teaching, which has been discussed in Chapter 4, she used some visual strategies in Cycle 1 and developed new strategies in Cycle 2 according to the classroom teacher's suggestions, students' feedback and her own observations. In Cycle 1, the teacher-researcher mainly adopted different visual-related activities including "You Draw I Guess", "Love Hug-Form the Total Price", and matching pictures with words to review what they had learnt. The teacher-researcher made the following findings.

- Only using visual materials cannot always engage students, and they can be used in a different way.
- Using some visual strategies based on visual materials can enhance students' word memorization, and trigger their interest.
- Students were interested in drawing and visually relevant activities.
- Connections could be made among Mandarin, English and visual materials.

When strategies failed to engage students, the teacher-researcher reflected on what had gone wrong. For example

- “Draw step by step according to instructions” was not successful as the teacher-researcher expected because some students gave up when some Mandarin instructions confused them.

Based on the teacher-researcher’s own reflections, feedback from students and the classroom teacher, the teacher-researcher modified and developed visual strategies in Cycle 2. She delivered a dumpling-making lesson, using videos and her own demonstration to scaffold students’ dumpling-making procedural understanding and let students know more about the Mandarin food, dumplings. She also prepared pictures in black and white for students to colour in, which thoroughly engaged most of the students.

When introducing new words in Cycle 1, for example with Mandarin food, the teacher-researcher asked questions about food the students liked to eat and showed students cards with characters and pictures on them. Therefore, students did not have the chance to think and visualize first. As a result, in Cycle 2, based on students and the classroom teacher’s suggestions, the teacher-researcher mainly let students think and visualize first before teaching them, and then showed them relevant pictures to let them check whether they had achieved the right answers. Students were more engaged in learning new words, sentences and characters. The following are her findings for Cycle 2.

- Students were more engaged in guessing, visualizing and finding answers by themselves. Visualization plays a significant role in their learning.
- Different kinds of visual material including videos, objects, teacher’s presentations could be combined together to attract students, and visual learning modes can be combined with other learning modes as well, including kinaesthetic learning modes, and music learning modes.

-
- Newly developed visual strategies can improve students' understanding of content, and help scaffold their procedural understanding.

This chapter has discussed the range of visual strategies that were used in Cycle 1 and developed in Cycle 2. As a result of reflection, the teacher-researcher observed that the learning outcomes for students were improved.

In addition, the teacher-researcher realized that students' engagement after class needed to be improved. In asking the students to observe a selection of Mandarin characters and try to interpret their meaning, only some of the students completed the task. The teacher-researcher noticed that when the classroom teacher assigned students to do research and prepare presentations after class in groups, the students were engaged in those tasks. As a result, the teacher-researcher reflected she had not engaged the students in after-class tasks, but only in class. Other after-class activities might include uploading relevant videos about China and the Mandarin language for students to watch, searching on the Internet and preparing for presentations.

Chapter 6 Conclusion

6.0 Introduction

As an action research within the context of the ROSETE program, the research explored the application of a visual teaching method that uses visual materials in teaching Mandarin. The research data was collected from various channels, including the students' visual worksheets, the teacher-researcher's UBD lesson plans, journals containing reflection and field notes as well as observation sheets detailing the performance of students in Mandarin lessons classroom during her period of teaching in the Year Five and Six class, and the classroom teacher's interview and students' feedback in a focus group. By analyzing the data and reviewing the research process, the teacher-researcher drew the conclusions of the key findings regarding the research questions, clarified the limitations and implications of this study, and recommendations for the further research in this chapter. In addition, this chapter also focuses on specific visual teaching strategies and the advisory instructions derived from and inspired by the visual-based teaching method and experience.

This thesis aimed at exploring effective visual pedagogy using various visual materials and developing visual strategies in Mandarin teaching. In this action research, data was collected from the teacher-researcher's actual Mandarin teaching in an Australian Public school

6.1 Chapter summaries

Within the context of the ROSETE program, this thesis explored the research of applications of visual pedagogy that aims to make Mandarin learnable. This chapter, a reflection stage of the whole action research, summarize the previous chapters, particularly emphasized on how this research addresses the research questions posed

and presented. Chapter 1 introduces the general background and brings out topic of this research. Chapter 2 reviews previous relevant studies. Chapter 3 presents methodology, and Chapters 4 and 5 illustrate the data analysis.

Chapter 1 introduced the background and illustrates significance of this study, leading to the research questions, research aims and expected research outcomes. The main research question of this study was: How can a visual method be developed to engage student learners in the Western Sydney Region by making Mandarin learnable in speaking, writing and understanding? The teacher-researcher was involved in the ROSETE program, and endeavored to explore an effective and efficient visual teaching method that makes Mandarin learnable for Australian public school students in the Western Sydney area. The application of the visual teaching approach achieved the expected research outcomes, such as stimulating students' interest in learning Mandarin, facilitating their learning abilities in the continuous learning of Mandarin and improving the teacher-researcher's professional capability as a Mandarin language teacher-researcher.

Chapter 2 reviewed three aspects of the literature. Firstly, basic terms about the Mandarin language were introduced and reviewed. Then the current situation of TCFL in Australia, the U.S. and the U.K. was reviewed. As a result of China's recent rapid economic and social development, great significance has been attached to learning Mandarin, and many relevant policies have been put forward not only in Australia but also in the U.S. and U.K. Chapter 2 also includes a review of visual literacy and visual pedagogy in language learning. The visual feature of pictographic characters was discussed as well. The chapter provided a foundation and orientations for the development of the research focus and questions about visual pedagogy. The teacher-researcher investigated the significance of visual materials' applications in classrooms, especially language classrooms. The literature suggests that many learners are visual learners, and visual materials such as pictures and videos, play significant roles in everyone's daily lives. However, few studies have been concerned with developing

visual strategies while using these visual materials. From the valuable findings of other scholars, the teacher-researcher could obtain clear ideas about what to focus on. Overall, academic literature on the subject of researching visual strategies in education is relatively small. In particular, there is an absence of theoretically grounded discussions of the possibilities and challenges of the approach for language education researchers. Also, the teacher-researcher reviewed relevant literature about students' engagement including its categorization and assessment to observe students' engagement in her Mandarin class more explicitly. Behavioral engagement refers to students' participation in class or group work. Affective engagement refers to students' positive feelings about and reactions to academic content, teachers, peers and school. Emotion coding was used to analyze participants' affective engagement in Mandarin lessons. Cognitive engagement refers to students' deep understanding of and expertise in the learning process, which is less observable and includes more internal indicators. Evaluation coding was employed in analyzing operative engagement.

Chapter 3 illustrated the methodology used in this mixed qualitative and quantitative action research, including the research design, data sources, methods for data collection and data interpretation. Principles of research, such as ethical issues, reliability and validity, and generalizability were also discussed in this chapter. Research data were collected from observation notes, self-reflective journals, lesson plans, interviews and students' work samples. In this chapter, the use of action research in this study was introduced, involving both theoretical and practical content relating to the theme of this study. To begin with, it introduced the definition and traits of qualitative research and action research, and then explained the reasons why they were adopted in this research in this study. To follow there was a review of the major principles guiding the research procedures. Then the research design is demonstrated specifically, giving readers an explicit outline about the future implementation of the research. Finally, data collection and analysis were systematically introduced since they were the basic source of this whole research. The whole study was carried out in a 'cyclical' form of implementation: planning stage, acting stage, developing stage and reflecting stage.

Chapter 4 was the first part of the data analysis, focusing on using various visual materials to engage students. In this chapter, the teacher-researcher focused on the assembling of a range of visual materials used in both Cycle 1 and 2. During the research, the teacher researcher mainly focused on two broad topics: “My spare time” and “My interests”, with four subtopics: Travel, Shopping, Food and Painting. The assumption was that they might be eager to learn some basic words and sentences in their daily lives related to these four subtopics in Mandarin. Student participants involved in this research were young children, as stated in Chapter 3, and the teacher-researcher showed students selected pictures, videos, real objects (such as clothes, passport and money), and her designed booklets and PowerPoints to make strong connections between target Mandarin terms and these visual aids. These visual materials used in her teaching are discussed in this chapter, with the support of data collected from the classroom teacher and students through interviews, alongside the teacher-researcher’s reflective journal and field notes on Mandarin teaching. Based on these collected data, the teacher-researcher expanded her choice of visual materials in the second cycle and developed more different strategies (as discussed in Chapter 5). During the two cycles, the teacher-researcher found that the visual materials could trigger students’ motivation if it were closely related to their interests, age and personal backgrounds. According to three types of engagement with different features, the teacher-researcher observed students’ three engagement, namely behavioural engagement, affective engagement and cognitive engagement, to see whether her visual materials engaged them or not.

Chapter 5 was the second part of the data analysis, developing visual strategies based on visual materials. The teacher-researcher discussed about various visual materials employed in her Mandarin teaching including videos, pictures, booklets and objects in Chapter 4. Based on feedback collected from the twelve students in the Year Five and Six and the classroom teacher, as well as notes taken by the teacher-researcher herself, both positive and negative aspects of those visual materials were found. To facilitate

students' learning and engage them, the teacher-researcher developed several visual strategies including "You Draw I Guess", "Match", and some new strategies, including playing videos in different ways and letting students answer questions to engage them and let students visualize and guess. These were developed to foster a higher level of student engagement based on data collected in Cycle 1. These visual materials based strategies did in fact lead to higher levels of students' engagement. The students became happier and more curious about learning Mandarin. Based on Cycle 1, new visual strategies were developed for Cycle 2 which contributed to students' further learning of Mandarin. Students had better memorization of words and knew more about China including its unique food-dumplings, and the Mandarin festival: Mid-Autumn Day. In this chapter, the teacher-researcher discussed visual strategies adopted in her Mandarin lessons in Cycle 1 and developed more effective visual strategies in Cycle 2.

6.2 Key findings

Based on the data analysis and the design of the teacher-researcher's action research, prior knowledge and a review of the relevant literature, key findings were crystallized focusing on the three contributory research questions of this study:

- 1) What kind of visual materials can be used to engage students in Mandarin as a Foreign Language teaching?
- 2) What are the effects of visual materials in learning Mandarin words and characters for Australian Public school students?
- 3) How can these visual materials be developed into useful strategies in classroom engagement?

These three contributory questions contribute to answering to the main research question of this research: How can a visual strategy be developed to engage students in Western Sydney public schools, making Chinese learnable?

6.2.1 Visual materials tremendously engage students and facilitate their learning of Mandarin words and characters.

In Chapter 2, the teacher-researcher reviewed various literature about visual materials, which are attached great importance by many scholars. Referring to Burmark (2002). it is an age of image, and visual, including images, graphics, pictures is the dominating literacy of the 21st century. To reemphasize, visual materials including pictures, videos have become an integral part of communication in modern society as Burmark (2002) stated. Based on a lot of literature reviewed, it can be concluded that visual materials can be used as an important tool to facilitate learners' understanding of complicated information and abstract concepts. As illustrated, Burmark (2002) claimed that, visual materials including pictures have become a fundamental part of communication in modern education. Also, Eisner (1972, cited in Duncum, 2014) made the influential claim that visual materials offered a domain of human experience that was both a unique way of knowing and contained a unique content. As for the learners, the majority of learners mainly learn through those visual materials. Barbe and Milone (1981, cited in Gilakjani, 2011) claimed that for primary school children the most frequent modality strengths are visual (30%). Visual materials including colourful pictures, animate images, and videos significantly facilitate their learning. Many studies examined the significance of visual materials and adopted those materials in the classroom, but research in the applications of visual materials in foreign language teaching is small and has not attracted sufficient attention. As a result, the teacher-researcher considered using various visual materials to facilitate students' Mandarin learning.

In this research, the teacher-researcher used various visual materials in Mandarin teaching. The core visual materials she adopted were pictures (mainly static picture), videos, objects, booklets and PowerPoint as specifically discussed in chapter 4. The teacher-researcher found that most students had different levels of engagement in learning Mandarin through those different visual materials. To some extent visual materials could attract students and help their learning.

T-R: How do you feel about the Mandarin class? You can share a general idea of the Mandarin class, or you can focus on one week's Mandarin lesson.

Student 1: It was clear and easy to remember some words with pictures and videos

T-R: So how do you feel about it? The visual things like videos, pictures and etc. Did they help you to engage in the lessons?

Student 3: Yeah, it was great fun and I enjoyed in Mandarin class very much.

Student 5: Yeah, it is great and good.

(Student focus group Interview, September 20, 2017)

During the interview, some students gave the teacher-researcher pictures they drew and the teacher-researcher was impressed by their drawings and surprised that students liked the visual materials she used.



Figure 6. 1 The teacher-researcher drawn by a student



Figure 6. 2 The teacher-researcher drawn by a student

The teacher-researcher asked them why they drew the pictures of her.

Student (the first picture): Because I like drawing and visual materials you used in Mandarin lessons.

Student (the second picture): We like you and enjoyed the time with you.
We like drawing, watching videos and playing some games as we learn
Mandarin.

Students were interested in learning Mandarin language and found they were learning Mandarin in an enjoyable way after having Mandarin lessons.

Visual materials including pictures and objects bring fun to the process of Mandarin learning, and make explicit connections to words and characters. Students knew the meaning of many words and characters clearly after seeing different visual materials. It was more interesting and attractive for them to learn Mandarin through various visual materials.

6.2.2 Different kinds of visual materials trigger different levels of students' engagement

In Cycle, Term 2, the teacher-researcher used pictures, booklets, videos and objects. Based on data collected in cycle 1, the teacher-researcher used PowerPoint instead of booklets and let students make dumplings directly. Different kinds of visual materials were used to trigger different levels of students' engagement. As discussed in Chapter 2, students' engagement can be divided into behavioural engagement, emotional engagement and cognitive engagement. The following table demonstrates students' three levels of engagement through these visual materials.

Table 24. Visual materials the teacher-researcher used and students' engagement

Types	Students' main performance	Visual materials used in Mandarin teaching	Advantages of the visual materials used
Behavioural engagement	Students were focused to pictures and what the teacher-researcher pointed, but they just followed the teacher-researcher's instructions to answer questions, read words.	Pictures: family members, daily things including trains, breads and other things students knew or normal in their daily life Objects: Daily things including clothes, shoes, bags	Lead students to concentrate on Mandarin lessons Motivate students
Emotional engagement	Students were focused and felt excited	Pictures: some daily things they like including hamburgers; Pictographic Mandarin characters Videos: Mandarin food song, greeting song, famous places to visit in China, number songs. The legend of Mandarin Mid-Autumn Day Objects: dumplings Booklets Three dimensional visual materials: mime, facial expression	Helps to set up motivational goals and self-regulated learning Involves deeper understanding of and expertise in the learning process Develops students' learning and problem-solving abilities
Cognitive engagement	Students had deeper understanding and higher interest They would discuss with each other and ask the teacher-researcher questions	Pictures: pictures with Mandarin characters hidden in them. Videos: ABC News, Ice paradise in North China Objects: Mandarin money	Makes students devote effort, concentration and attention Involves students asking questions, contributing to class discussions, participating actively in classroom activities and finishing tasks well

From the table, it can be seen that many students were interested in things from their daily lives including food, and hip-pop style videos. As mentioned in Chapter 4 and Chapter 5, some students claimed that they liked hamburgers very much and some videos they liked were in a hip-pop style. Also, they could be attracted by something they never knew before including Mandarin money and Mandarin festivals. Students at this age seemed to like more mature and interesting concepts and things. In addition, the teacher-researcher also compared students' engagement through pictures, videos, objects, booklets and PowerPoint. According to her observation and students' feedback, she found that students liked videos more than still pictures. In terms of the booklet, students were more interested in the pictures in it than the words. Also, students were interested in three dimensional visual materials including mouthing words and facial expression as well. As the teacher-researcher's journal noted in Chapter 4, when the students were given booklets, they were looking at the pictures, rather than the writing, inside those booklets.

6.2.3 Visual materials based strategies engage students better

Besides using visual materials, the teacher-researcher also adopted visual strategies based on her reflection and classroom teacher's and students' feedback to achieve higher level of students' engagement. Visual strategies are widely applied in various disciplines because of their inherent appeal. Visual strategy is defined as a visual related teaching method implementing methodologies closely connected with the audio-visual paradigm and inspiring learners' visual literacy in the classroom context through the use of visual representations (Goldfarb, 2002). The following two tables show the development of the teacher-researcher's teaching from simply using the visual materials to designing visual strategies

In cycle 1, the main visual materials and visual strategies are demonstrated as follow:

Table 25. Visual materials and visual materials based visual strategies (Cycle 1)

Visual materials	Cycle 1 visual strategies
Pictures and real objects	You draw I guess
	Review words related to visual materials
	Match the pictures with the words
	Ball Game: Each student sticks a picture on his/her clothes. One student starts throwing the ball to another student, and he/she needs to say the word of the picture on that student's clothes
	The love hug: Each student with one picture of money on clothes, presenting a price. When the teacher says a price in Mandarin, students combine to make the total of the money in the price.
Pictographic	Showing students oracle bone scriptures.
Videos	Only showing students videos and reviewing some relevant words, phrases after the video
Booklets	Using booklets to make the process of learning more logical, and let students to find answers in the booklets by themselves.

In Cycle 2, the teacher researcher made more challenging visual materials and developed visual strategies.

Table 26. Visual materials and visual materials based visual strategies (Cycle 2)

Visual materials used in Cycle 2	Relevant visual strategies/activities
Pictures	Show pictures and pronunciations, students guess and match
	Fill in the color in a picture according to the color instructions in Mandarin.
	Show students pictures with relevant Mandarin characters hided in it, and let them try to find first.
Videos	Ask students to take note while watching a video and answer teacher's question during or after the video.
	The teacher plays a small part the video related to a small topic or a new word, review and then continue the next part the video or another video related to the next small topic or new words.
Objects	Dumplings making, Students learn to make real dumplings and taste them after learning the word of dumplings in Mandarin.
PowerPoint	The teacher shows students a row of colours they've learnt and then disappear them in few seconds. Students should try to remember them and who say the colours in Mandarin in order can get a sticker. The teacher picks two students in pairs to have competitions as well.

Based on the visual materials the teacher-researcher adopted in Mandarin teaching, she used some visual strategies in Cycle 1 and developed new strategies in Cycle 2 according to the classroom teacher's suggestions, students' feedback and her own observation. In Cycle1, the teacher-researcher mainly adopted different visual-related strategies including "You Draw I Guess", "Love Hug-Form the Total Price", and matching pictures with words to review what they had learnt. The teacher-researcher made the following findings.

- Using visual materials can engage students most of the time, and they can be used in different ways to achieve a higher level of students' engagement. For an example, videos can be played in several parts or two videos can be played alternately
- Using some visual strategies based on visual materials could enhance students' word memorization, and trigger their interest.

-
- Students were interested in drawing and visual relevant activities.

However, some strategies were not attractive and effective enough to engage students, and failed to facilitate their learning.

- Students thought some activities were not interesting enough to engage in.
- Some strategies were not effective. For an example, some students gave up on “Draw step by step according to instructions”, because some Mandarin instructions confused them.
- Connections could be made among Mandarin, English and visual materials, which make it easier and more interesting for students to learn Mandarin when using letters in Mandarin pronunciation to connect with various pictures and English words, as discussed in Chapter 5.

Based on the teacher-researcher’s own reflections, students’ and the classroom teacher’s feedback, the teacher-researcher modified and developed visual strategies in Cycle 2. She delivered a dumpling-making lesson, using videos and demonstrating it herself, scaffolding students’ dumpling-making procedural understanding and letting students know more about the Mandarin food and dumplings. She also prepared pictures in black and white for students to colour in, which was very engaging for students.

When introducing new words, the teacher-researcher mainly asked some relevant questions and showed students cards with characters and pronunciations and pictures on them. Therefore, students did not have the chance to think and visualize it for themselves. As a result, in Cycle 2, based on students’ and the classroom teacher’s suggestions, the teacher-researcher mainly let students think and visualize first before teaching them and then showed them relevant pictures to let them check whether they had arrived at the right answers. Students were more engaged in learning new words, sentences and characters. The following are her findings in Cycle 2.

-
- Students were more engaged in guessing, visualizing and finding answers by themselves. Visualization plays a significant role in their leaning.
 - Different kinds of visual material including videos, objects, someone's presentations can be combined together to attract students, and visual learning modes can be combined with other learning modes as well, including kinaesthetic learning modes and musical learning modes.
 - Newly developed visual strategies can improve students' understanding of content, and help them to scaffold their procedural understanding.

To sum up, visual strategies can be developed based on different visual materials. One strategy is using visual materials in a different way or in a different order. As discussed, a video can be divided into several parts, then presented one part at a time; showing pictures or objects after students have had an opportunity to visualize and guess the correct Mandarin words for them; matching the pictures with words. Other visual material based activities include black and white pictures to colour in, "You draw I guess", and letting students make dumplings by themselves after watching a video and the teacher-researcher's own demonstration.

6.3 Limitations of this research

- It was a limited but intensive study as a research study. The teacher-researcher was assigned to a public school in Australia, teaching Mandarin from Kindergarten to Year Five and Six, and she collected data from one classroom teacher and a focus group of students (twelve students) from the Year Five and Six class. Although this data in the form of feedback was a creative and constructive source for the purpose of the teacher-researcher's visual teaching and research, the data source was still limited in quantity, and would not necessarily apply to all public -school students all over Australia. In addition, the teacher-researcher focused on higher level graders achieving students from

the primary school. As a result, the choice of visual materials and use of visual strategies may have been different had she been researching younger or less capable students.

- 4. The time available for this research was limited. The teacher-researcher used two cycles involving two terms in this action research, and she did not do further research concerning some new issues which emerged from the research because of the limited time available, as mentioned in Chapter 4 and Chapter 5. Also, she did not have the time for students to do more visually related hands-on activities, which particularly engaged the students, as she would have liked to.

6.4 Recommendation for the future research

Since there were some limitations, the teacher-researcher has made two recommendations for future research as well. The first recommendation is that a long-term research study should be conducted to assess the effectiveness of a visual teaching approach. As was suggested by the students and the classroom teacher, the teacher-researcher could have had a deeper understanding of visual materials based teaching, if she had more time to do further research. Also, students-participants involved in this research were only beginner Mandarin language learners without Mandarin backgrounds, so the teaching content was limited to simple words and sentences. Only through a longer-term study can the effects of visual materials based strategies in teaching higher level language skills be explored.

The second recommendation is that a larger number of participants should be involved to develop the generalizability of the research. The student- participants involved in this research were 12 Year 5 and Year 6 students in a public school, but the characteristics and personalities of Australian students can differ among different public schools. Their feedback and suggestions could not represent all public school students all over

Australia. If more participants from variety of different schools were involved in future research, the generalizability of visual materials based teaching could be better ascertained. If these recommendations are to be implemented in the future research, then the credibility of the visual materials based teaching strategies can be better tested and eventually confirmed.

6.5 Difficulties encountered in Mandarin teaching and implications for beginner teachers

In the course of Mandarin teaching, the teacher-researcher encountered many difficulties. One of the main difficulties was choosing the most effective visual materials which are not only relevant to the teaching contents but also students' preferences. Another difficulty was connecting Mandarin language to students' daily lives and experiences.

Based on the coding used in Chapter 5, this chapter draws the following implications for teaching Mandarin language in Australian public schools.

1. As a new teacher-researcher, more effective visual related strategies need to be developed and explored. Higher grade students seem to be becoming more mature. Therefore, the choice of visual materials and use of visual strategies should contain more mature content and be challenging to their understanding. Visual materials and visual strategies are supposed to facilitate students' thinking and learning, rather than simply show them target language terms. The following are criteria for selecting visual materials and using visual strategies.

- liàng tǐ cái yī 量体裁衣: **Design resources according to actual circumstance.**

This literally means customizing the clothes consistent with one's figure. In other words, the teaching resources should be personalized according to one's characteristics and

needs. As the Australian Professional Standards required for Teachers (AITSL, 2011), a qualified teacher needs to “know students and how they learn” (p.3), which matches a Mandarin idiom: 因材施教 [*yin cai shi jiao*], which means teaching students in accordance with their aptitude. When the teacher-researcher began her Mandarin teaching, she found there were enormous differences between Mandarin and Australian students, including their learning habits, and personal characteristics. In the Australian public school, the teacher-researcher came to know her students through her own observation, and interviewing them and their classroom teacher. The teacher-researcher endeavored to choose visual material that students were interested in and to develop visual strategies that could engage students. As discussed before, the teacher-researcher assessed her visual materials and strategies by examining students’ behavioural engagement, emotional engagement and cognitive engagement, among which emotional engagement proved to be crucial in contributing to their sustainable and deeper learning. The teacher-researcher measured students’ emotions through their facial expressions, class performance and by herself using emotion coding. Based on the analyzed data, she modified the selection of visual materials and developed new visual strategies which were more suitable for the students. Only the teacher-researcher knew about the “student’s figures” and their emotional needs, could she scaffold effective visual teaching.

- tóu qí suǒ hào 投其所好: **Meeting student engagement and interest**

This Mandarin idiom literally means satisfying another’s pleasure to attract them. A qualified teacher in Australia should have the ability to “use a range of selected and creative resources to engage students in their learning (AITSL, 2011)”. Language learning can be repetitive, especially in a traditional language classroom, because students are more likely to receive new knowledge passively and repeat certain linguistic items mechanically for memorizing. This passive state can often lead students to lose interest and the lack of motivation to learn continuously.

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2. As discussed in Chapter 4, using booklets makes the teaching and learning more logical. However, for students at this age, other visual strategies should be carefully combined with the booklets. Most students were visual learners, and they were more interested in the pictures than the words in booklets as discussed before. As a result, beginner teachers are advised to design more creative and interesting booklets which include a variety of pictures, or perhaps a little story involving highlighted target teaching terms with a lot of vignettes. As one student suggested:

Student 8: You can prepare short simple story books with pictures

(Student focus group Interview, June 28, 2017).

As the limitations described in Section 6.3, the teacher-researcher did not design a short simple story book with various vignettes because of the limited time. The booklets also need to be improved in the future.

3. As for hands on activities, most students enjoyed it very much. In this research, the teacher-researcher delivered a hands-on activity –a dumpling making lesson. In this lesson, she added two visuals: a video of dumpling making, and presentation of herself making dumplings. Students were highly engaged in this. As the classroom teacher commented:

TR: Do you have any other suggestions?

CT: To keep students engaged, continue to teach lessons introducing any new words or ideas with hands-on activities

(Classroom teacher Interview, September 20, 2017).

Because of this recommendation, whenever practical and feasible, the teacher-researcher is willing to conducted more hands-on activities in the future.

4. Last but not least, combine modern technology with visual materials. In this research, the teacher-researcher did not use much technology, but she found that higher-level graders were more interested in fashion and modern technology. The

Year Five and Six students were of an age to be able to create their own videos and provide the Mandarin words for what they created. At the end of Term 4, the teacher-researcher discovered that the students were asked to make a video for English literacy, and she now believes that task could have been used for the study of Mandarin, which could harness students' creativity productivity. In any future research, the researcher could explore more use of PowerPoint, and use movie making applications to make short movies with students together or make videos online. In addition, the teacher-researcher could set up a YouTube public channel for students to watch videos about China and Mandarin language to improve students' engagement after class. And in the last term, it occurred to the teacher-researcher that she could set up a YouTube public channel and upload videos that she found or that she had created about China and Mandarin language skills for students to watch in their spare time if they liked, which would improve students' engagement after class. It was unfortunate that she did not think of this before the last term. She thought that she still could upload relevant videos on YouTube returning to China, but realized that YouTube was forbidden in the mainland of China. She considered using some applications to this circumvent and gain access to YouTube.

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Appendix 1 Questions for students

The interview questions for students are designed to relate to the research topic and are based on the interviewees' situations. The followings are several of the main prepared questions.

Interviewees	Questions
Students	Do you like this lesson?
	Do you think these visual materials help you learn Mandarin?
	Can you remember these Mandarin words well after these activities in this lesson?
	What you do not like in this lesson?
	What do you want me to do in the next lesson?
	Do you think your Mandarin is better after these few lessons?
	* Why have you drawn this picture? How do you think when you see these words?

Appendix 2 Questions for teachers

The interview questions for classroom teachers are designed to related to the research topic and based on the interviewees' situations. The followings are several of the main prepared questions.

Classroom teachers	Do you think the students are highly engaged in this lesson?
	What do you think of the visual materials I used in this lesson? Were they suitable for the teaching content?
	What about my teaching strategies?
	Do you feel students learn Mandarin better?
	Do you have any other suggestions?

Appendix 3 Timeline

Timeline

	Date	Process
Researcher Reflective Journal	August 2016- December 2016	CoC
	January-February	Ethics in preparation for March meeting
	April 2017 – October 2017	Data collection: Cycle 1(April 2017-August,2017)
		Data collection: Cycle 2(August 2017-December 2017)
	November 2017 – January 2018	Data Analysis and writing draft
	March 2018	Final thesis

Appendix 4 Booklets the teacher-researcher designed

My Spare time



一、 Travel

旅行 (lǚ xíng)

1. Prepare for your trip

Draw your answers



Questions (discuss with your partners):

- 1) Who are you going to travel with?
- 2) Where would you like to travel?
- 3) How will you go there?
- 4) What do you need to take for your trip?

Who?

Where?

How?

What?

Find your answers; try to read the words

Who:



爸爸

爷爷

bà ba



妈妈

mā ma



yé ye



奶奶

nǎi nai

mei



弟弟 哥哥

dì dì gē ge



姐姐 妹妹

jiě jie mèi



家人

jiā rén



朋友

péng you

Other ideas ?

Bingo Game

Where:



中国
zhōng guó



法国
fǎ guó



意大利
yì dà lì



新西兰
xīn xī lán



澳大利亚
ào dà lì yà



德国
dé guó

Other ideas?

How:



火车
huǒ chē



飞机
fēi jī



汽车
qì chē

Other ideas or
suggestions?

What:



衣服
yīfu



鞋子
xiézi



书包
shūbāo



手机
shǒujī



钱
qián



护照
hùzhào

Other ideas or suggestions?

My trip to Australia in May, give me some suggestions

wǒ hé péng you zuò fēi jī qù ào dà lì yà

我和朋友坐飞机去澳大利亚

I travel to Australia with my friends by plane.

wǒ yào dài

我要带...

I would like to take...



wǒ hé _____ qù zhōng guó

我和_____去中国

I travel to China with _____by__

wǒ yào dài...

我要带...

I would like to take...

Plan your trip to China



2. Enjoy your trip

Please stick your photos or draw pictures of the view you like during your trip.

What's your feeling about the trip?

I am very....

wǒ hěn...



开心

kāi xīn



生气

shēng qì



惊喜

jīng xǐ



失望

shī wàng

My Performance

Week 1

Week 2

Week 3

Week 4

Week 5

My Spare time^(二)



二. Shopping 购物(gòuwù)

1. I want ...



二. Shopping 购物(gòuwù)

2. How much is it?

1) qián:





yī yuán → 1 dollar
— 元



wǔ jiǎo → 50 cents
五 角



→ 10 cents

Can you do



+



=

6 元



-



=



-



=



+



=



+



=



+



=

二. Shopping 购物(gòuwù)

3. Cheap a little bit, please.



tài guì le , pián yi diǎn.

Too expensive, cheap a liitle please.



My Performance

Week 6

Week 7

Week 8

Week 9

Week 10

Appendix 5 Human Ethics Approval

Locked Bag 1797
Penrith NSW 2751 Australia
Research Engagement, Development and Innovation (REDI)



REDI Reference: H12076
Risk Rating: Low 2 - HREC

HUMAN RESEARCH ETHICS COMMITTEE

10 April 2017

Associate Professor Anne Power
School of Education

Dear Anne,

I wish to formally advise you that the Human Research Ethics Committee has approved your research proposal H12076 "An exploration of developing visual pedagogy, utilizing students' visual literacy in Chinese Language Education: A Teacher Action Research Project", until 20 February 2018 with the provision of a progress report annually if over 12 months and a final report on completion. In providing this approval the HREC determined that the proposal meets the requirements of the National Statement on Ethical Conduct in Human Research.

This protocol covers the following researchers:

Anne Power, Jinghe Han, Yaoyao Jin

Conditions of Approval

1. A progress report will be due annually on the anniversary of the approval date.
2. A final report will be due at the expiration of the approval period.
3. Any amendments to the project must be approved by the Human Research Ethics Committee prior to being implemented. Amendments must be requested using the HREC Amendment Request Form:
https://www.westernsydney.edu.au/_data/assets/word_doc/0012/1096995/FORM_Amendment_Request.docx
4. Any serious or unexpected adverse events on participants must be reported to the Human Research Ethics Committee via the Human Ethics Officer as a matter of priority.
5. Any unforeseen events that might affect continued ethical acceptability of the project should also be reported to the Committee as a matter of priority
6. Consent forms are to be retained within the archives of the School or Research Institute and made available to the Committee upon request.
7. Project specific conditions:
There are no specific conditions applicable.

Please quote the registration number and title as indicated above in the subject line on all future correspondence related to this project. All correspondence should be sent to the e-mail address humanethics@westernsydney.edu.au as this e-mail address is closely monitored.

Yours sincerely

A handwritten signature in black ink, appearing to read 'E Deane'.

Professor Elizabeth Deane
Presiding Member,
Western Sydney University Human Research Ethics Committee

Appendix 6 State Research Approval Process (SERAP)

Approval



Miss Yaoyao Jin
78 Methven
MOUNT DRUITT NSW 2770

DOC17/576837
SERAP 2017090

Dear Miss Jin

I refer to your application to conduct a research project in NSW government schools entitled *An exploration of developing visual pedagogy, utilizing students' visual literacy in Chinese language education - A teacher researcher research project*. I am pleased to inform you that your application has been approved.

You may contact principals of the nominated schools to seek their participation. **You should include a copy of this letter with the documents you send to principals.**

This approval will remain valid until 20-Feb-2018.

The following researchers or research assistants have fulfilled the Working with Children screening requirements to interact with or observe children for the purposes of this research for the period indicated:

Researcher name	WWCC	WWCC expires
Yaoyao Jin	WWC1148773V	25-Oct-2021

I draw your attention to the following requirements for all researchers in NSW government schools:

- ☐ The privacy of participants is to be protected as per the NSW Privacy and Personal Information Protection Act 1998.
- ☐ School principals have the right to withdraw the school from the study at any time. The approval of the principal for the specific method of gathering information must also be sought.
- ☐ The privacy of the school and the students is to be protected.
- ☐ The participation of teachers and students must be voluntary and must be at the school's convenience.
- ☐ Any proposal to publish the outcomes of the study should be discussed with the research approvals officer before publication proceeds.
- ☐ All conditions attached to the approval must be complied with.

When your study is completed please email your report to: serap@det.nsw.edu.au
You may also be asked to present on the findings of your research.

I wish you every success with your research.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Liliana Ructtinger'.

Liliana Ructtinger
Relieving Manager, Research
13 June 2017

School Policy and Information Management
NSW Department of Education
Level 1, 1 Oxford Street, Darlinghurst NSW 2010 – Locked Bag 53, Darlinghurst NSW 1300
Telephone: 02 9244 5060 – Email: serap@det.nsw.edu.au

Appendix 7 Participant Information Sheet (the classroom teacher)

WESTERN SYDNEY
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Participant Information Sheet – General

Project Title: An exploration of developing visual pedagogy, utilizing students' visual literacy in Chinese Language Education: A Teacher Action Research Project

Project Summary: Chinese, as one of the most prevalent languages, is attached great significance in the modern time, which is closely related to the rapid development of China. After a long history, teaching Chinese as a foreign language (referred to hereafter as TCFL) is gradually normalized with the support of numerous governments worldwide. On the one hand, TCFL is in urgently demand under the background of China's development and globalization. On the other hand, there are many challenges existing in TCFL. This project will focus on visual pedagogy on Chinese language teaching, utilizing students' visual literacy to make Chinese learnable.

You are invited to participate in a research study being conducted by [Enter text – insert name, position and School/Institute] [Enter if appropriate – under the Supervision of [Insert name, position and School/Institute].] The research is [enter text briefly explaining the research project]

How is the study being paid for? The NSW Department of Education and Ningbo Department of Education will give me support.

What will I be asked to do?

You will be asked to take students Chinese lessons, and give the teacher researcher some feedbacks if possible.

How much of my time will I need to give?

1 year

What benefits will I, and/or the broader community, receive for participating?

Knowing some Chinese

Will the study involve any risk or discomfort for me? If so, what will be done to rectify it?

No risk

How do you intend to publish or disseminate the results?

It is anticipated that the results of this research project will be published and/or presented in a variety of forums. In any publication and/or presentation, information will be provided in such a way that the participant cannot be identified, except with your permission. [describe how confidentiality will be maintained]

Will the data and information that I have provided be disposed of?

Please be assured that only the researchers will have access to the raw data you provide and that your data will not be used in any other projects. Please note that minimum retention period for data collection is five years post publication. The data and information you have provided will be securely disposed of.

Can I withdraw from the study?

Participation is entirely voluntary and you are not obliged to be involved. If you do participate you can withdraw at any time without giving reason (*change this statement if it is not relevant*).

If you do choose to withdraw, any information that you have supplied [*enter text – explaining what will happen to data already collected from the participant*]

[*Provide specific information about how participants can withdraw from the research. In the case where they are unable to withdraw their information (eg, focus group participation or an anonymous survey) please provide further details*]

Can I tell other people about the study? [*Remove if not relevant*]

Yes, you can tell other people about the study by [*enter an appropriate text. For example:*

providing them with the Chief Investigator's contact details. They can contact the Chief Investigator to discuss their participation in the research project and obtain a copy of the information sheet.

sending the survey link to other people.]

What if I require further information?

Please contact [*enter text – name of investigator*] should you wish to discuss the research further before deciding whether or not to participate

[*Enter text – insert names, positions and phone numbers (use University linked phone numbers). Use separate lines if there is more than one contact person. If relevant, include Supervisor details as well*]

What if I have a complaint?

If you have any complaints or reservations about the ethical conduct of this research, you may contact the Ethics Committee through Research Engagement, Development and Innovation (REDI) on Tel +61 2 4736 0229 or email humanethics@westernsydney.edu.au.

Any issues you raise will be treated in confidence and investigated fully, and you will be informed of the outcome.

If you agree to participate in this study, you may be asked to sign the Participant Consent Form. The information sheet is for you to keep and the consent form is retained by the researcher/s.

This study has been approved by the Western Sydney University Human Research Ethics Committee. The Approval number is [*enter approval number once the project has been approved*].

Appendix 8 Participant Information Sheet(Parent/Carer)

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Participant Information Sheet – Parent/Carer (Specific)

[Remove this bracket entirely once you have read the following instruction: This sheet is to be used when a Parent/Carer is being informed about research that their child is being asked to participate in. Where parents are a participant group of their own, you must use the 'Participant Information Sheet – General' and label it accordingly]

Project Title: An exploration of developing visual pedagogy, utilizing students' visual literacy in Chinese Language Education: A Teacher Action Research Project

Project Summary:

Your child is invited to participate in a research study being conducted by ~~Yanyan Jin~~ in Rydalmere Public school.

Chinese, as one of the most prevalent languages, is attached great significance in the modern time, which is closely related to the rapid development of China. After a long history, teaching Chinese as a foreign language (referred to hereafter as TCFL) is gradually normalized with the support of numerous governments worldwide. One the one hand, TCFL is in urgently demand under the background of China's development and globalization. On the other hand, there are many challenges existing in TCFL. This project will focus on visual pedagogy on Chinese language teaching, utilizing students' visual literacy to make Chinese learnable.

How is the study being paid for? [Enter text explaining any funding for the project]

What will my child be asked to do?

Your child will be asked to take Chinese lessons and give the teacher researcher some feedbacks if possible

How much of my child's time will he/she need to give?

1 year each Wednesday

[Optional text: Children not participating in the study will be [insert appropriate activity] during the time the research is being carried out]

What benefits will my child, and/or the broader community, receive for participating?

Knowing some Chinese and Chinese culture.

Will the study involve any risk or discomfort for my child? If so, what will be done to rectify it?

No risks

How do you intend to publish or disseminate the results?

It is anticipated that the results of this research project will be published and/or presented in a variety of forums. In any publication and/or presentation, information will be provided in such a way that the participant cannot be identified, except with your permission. *[describe how confidentiality will be maintained]*

Will the data and information that my child provides be disposed of?

Please be assured that only the researchers will have access to the raw data your child will provide and that their data will not be used in any other projects. Please note that minimum retention period for data collection is five years post publication. The data and information you have provided will be securely disposed of.

Can I withdraw my child from the study? Can my child withdraw from the study?

Your child's participation in the study is entirely voluntary and they are not obliged to be involved. Your child may withdraw from the study at any time – or you may withdraw your child from the study at which point all written and audio records of your child's participation will be destroyed.

[Provide specific information about how participants can withdraw from the research. In the case where they are unable to withdraw their information (eg, focus group participation or an anonymous survey) please provide further details]

Can I, or my child, tell other people about the study? *[Remove if not relevant]*

Yes, you or your child, can tell other people about the study by *[enter an appropriate text. For example:*

providing them with the Chief Investigator's contact details. They can contact the Chief Investigator to discuss their participation in the research project and obtain a copy of the information sheet.

sending the survey link to other people.]

What if I require further information?

Please contact *[enter text – name of investigator]* should you wish to discuss the research further before deciding whether or not to participate

[Enter text – insert names, positions and phone numbers (use University linked phone numbers). Use separate lines if there is more than one contact person. If relevant, include Supervisor details as well]

What if I have a complaint?

If you have any complaints or reservations about the ethical conduct of this research, you may contact the Ethics Committee through Research Engagement, Development and Innovation (REDI) on Tel +61 2 4736 0229 or email humanethics@westernsydney.edu.au.

Any issues you raise will be treated in confidence and investigated fully, and you will be informed of the outcome.

If you agree for your child to participate in this study, you may be asked to sign the Consent Form. The information sheet is for you to keep and the consent form is retained by the researcher/s.

University of Western Sydney
ABN 52 014 069 881 CRICOS Provider No 00912K
Locked Bag 1797 Penrith NSW 2751 Australia
westernsydney.edu.au

Appendix 9 Participant Consent Forms (Parent/Care)

WESTERN SYDNEY
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Consent Form – Parent/Carer (Specific)

Project Title:

An exploration of developing visual pedagogy, utilizing students' visual literacy in Chinese
Language Education: A Teacher Action Research Project

☐ _____, hereby consent for my child *[Parent/Carer to print name of child]*, to participate in the above named research project.

I have discussed participation in the project with my child and my child agrees to their participation in the project.

I acknowledge that:

- I have read the participant information sheet (or where appropriate, have had it read to me) and have been given the opportunity to discuss the information and my child's involvement in the project with the researcher/s
- The procedures required for the project and the time involved have been explained to me, and any questions I have about the project have been answered to my satisfaction.

I consent for my child to:

[Insert tick box option for each specific activity e.g.]

- ☐ *Participate in an interview*
- ☐ *Having their information audio recorded*
- ☐ *Having their photo taken]*

I consent for my child's data and information provided to be used for this project.

[Option 1]

I understand that my child's involvement is confidential and that the information gained during the study may be published but no information about them will be used in any way that reveals their identity.

Or

[Option 2]

I understand that my child's involvement and information gained during the study may be published. I understand that information about my child will be used and can potentially reveal their identity.

[Option 1]

I understand that I can withdraw my child, or my child can withdraw, from the study at any time without affecting their relationship with the researcher/s, and any organisations involved, now or in the future.

Or

[Option 2]

I understand that my child's participation in this study will have no effect on their relationship with the researcher/s, and any organisations involved, now or in the future. I understand that I, or my child, will be unable to withdraw their data and information from this project. *[insert reason e.g. focus group information cannot be withdrawn. Information provided will be non-identified unless Option 2 is chosen in the above statement]*

Signed:

Name:

Date:

This study has been approved by the Human Research Ethics Committee at Western Sydney University. The ethics reference number is: U[insert number]

What if I have a complaint?

If you have any complaints or reservations about the ethical conduct of this research, you may contact the Ethics Committee through Research Engagement, Development and Innovation (REDI) on Tel +61 2 4736 0229 or email humanethics@westernsydney.edu.au.

Any issues you raise will be treated in confidence and investigated fully, and you will be informed of the outcome.

Appendix 10 Participant Consent Form (the Classroom teacher)

WESTERN SYDNEY
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Consent Form – Classroom teacher

Project Title: An exploration of developing visual pedagogy, utilizing students' visual literacy in Chinese Language Education: A Teacher Action Research Project

I, _____, hereby consent to participate in the above named research project.

I acknowledge that:

- I have read the participant information sheet (or where appropriate, have had it read to me) and have been given the opportunity to discuss the information and my involvement in the project with the researcher/s
- The procedures required for the project and the time involved have been explained to me, and any questions I have about the project have been answered to my satisfaction.

I consent to:

[Insert tick box option for each specific activity e.g.]

- ☐ *Participating in an interview*
- ☐ *Having the interview audio recorded*
- ☐ *Having my photo taken]*

I consent for my data and information provided to be used for this project.

[Option 1]

I understand that my involvement is confidential and that the information gained during the study may be published but no information about me will be used in any way that reveals my identity.

Or

[Option 2]

I understand that my involvement and information gained during the study may be published. I understand that information about me will be used and can potentially reveal my identity.

[Researchers must remove the option that is not relevant to the research]

I understand that I can withdraw from the study at any time without affecting my relationship with the researcher/s, and any organisations involved, now or in the future.

Or

[Option 2]

I understand that my participation in this study will have no effect on my relationship with the researcher/s, and any organisations involved, now or in the future. I understand that I will be unable to withdraw my data and information from this project. *[insert reason e.g. focus group information cannot be withdrawn. Information provided will be non-identified unless Option 2 is chosen in the above statement]*

Signed:

Name:

Date:

Return address: *[Remove if not relevant]*

This study has been approved by the Human Research Ethics Committee at Western Sydney University. The ethics reference number is: H*[insert number]*

What if I have a complaint?

If you have any complaints or reservations about the ethical conduct of this research, you may contact the Ethics Committee through Research Engagement, Development and Innovation (REDI) on Tel +61 2 4736 0229 or email humanethics@westernsydney.edu.au.

Any issues you raise will be treated in confidence and investigated fully, and you will be informed of the outcome.